Site Size Estimates and the Diversity Factor in Late Cypriot Settlement Histories

MARIA IACOVOU
Department of History and Archaeology
University of Cyprus
P.O. Box 20537
1678 Nicosia
Cyprus
mariai@ucy.ac.cy

Charts with size estimates for Late Cypriot settlements put forward in the 1990s have become dangerously misleading. The estimates are not based on common, clearly defined criteria, nor do they take into account the high diversity factor among settlements or the uneven spatial and temporal exploration of their urban fabric. These charts disseminate false impressions, which in turn affect the interpretation of the island's first urban phenomenon. Despite the fact that settlement diversity is beginning to be acknowledged as a key parameter of Late Cypriot urbanism, the individual histories of the first Cypriot towns in the course of the Late Bronze Age have not been exhaustively studied. Inevitably, this undermines attempts to reach a comprehensive solution as regards the island's state model(s) in the Late Bronze Age.

THE PROBLEM

"It is difficult to estimate the scale of population growth in the Late Cypriot period . . . , but it appears that a significant population increase and a major redistribution of population was underway, as high concentrations of settlers gathered in towns that ranged from 12–70 ha or more in area" (Keswani 2004: 154). With this sentence Priscilla Keswani, a scholar to whom we owe a state-of-the-art analysis of mortuary data in the name of reconstructing the social and political history of Bronze Age Cyprus, introduces "Urbanization and Changes in Social Structure during the Late Bronze Age" in a masterly monograph published in 2004. Although nobody would deny that Cyprus is a classic example of secondary state formation in the context of the second millennium B.C. Mediterranean (cf. Keswani 1996: 220; Webb 1999: 3, 307), the definition of "urbanism" in the Bronze Age history of Cyprus is far from straightforward. This can be attributed to two intrinsic factors: (a) the island fails (in my opinion, *chooses not*) to conform to established continental—whether Western Asiatic or Aegean—models of urbanization (cf. Peltenburg 1996: 27); and (b) the settlements apparently followed varied paths to urbanization (cf. Keswani 1996; 2004). This notwithstanding, a whole range of Late Cypriot settlements are unanimously defined as urban centers.

"A useful definition of urbanism," A. Bernard Knapp writes (1997: 56), "stems from what a population center actually does, how it concentrates in one place specialized functions—like production, administration, markets, social services, and defense—and carries them out in relation to a broader hinterland or as the dominant force in a settlement hierarchy." Despite the fact that at first glance site size is not included in this definition—which we consider most appropriate for the purposes of our discussion—the concept of size—size increase, to be precise—is treated as a sine qua non for the development of urban polities (Knapp 1997: 57). It is no wonder, therefore, that scholars have turned their attention to this seemingly fundamental urban criterion. Here, however, the question in my mind is: How did Keswani estimate a range of 12–70 ha for these

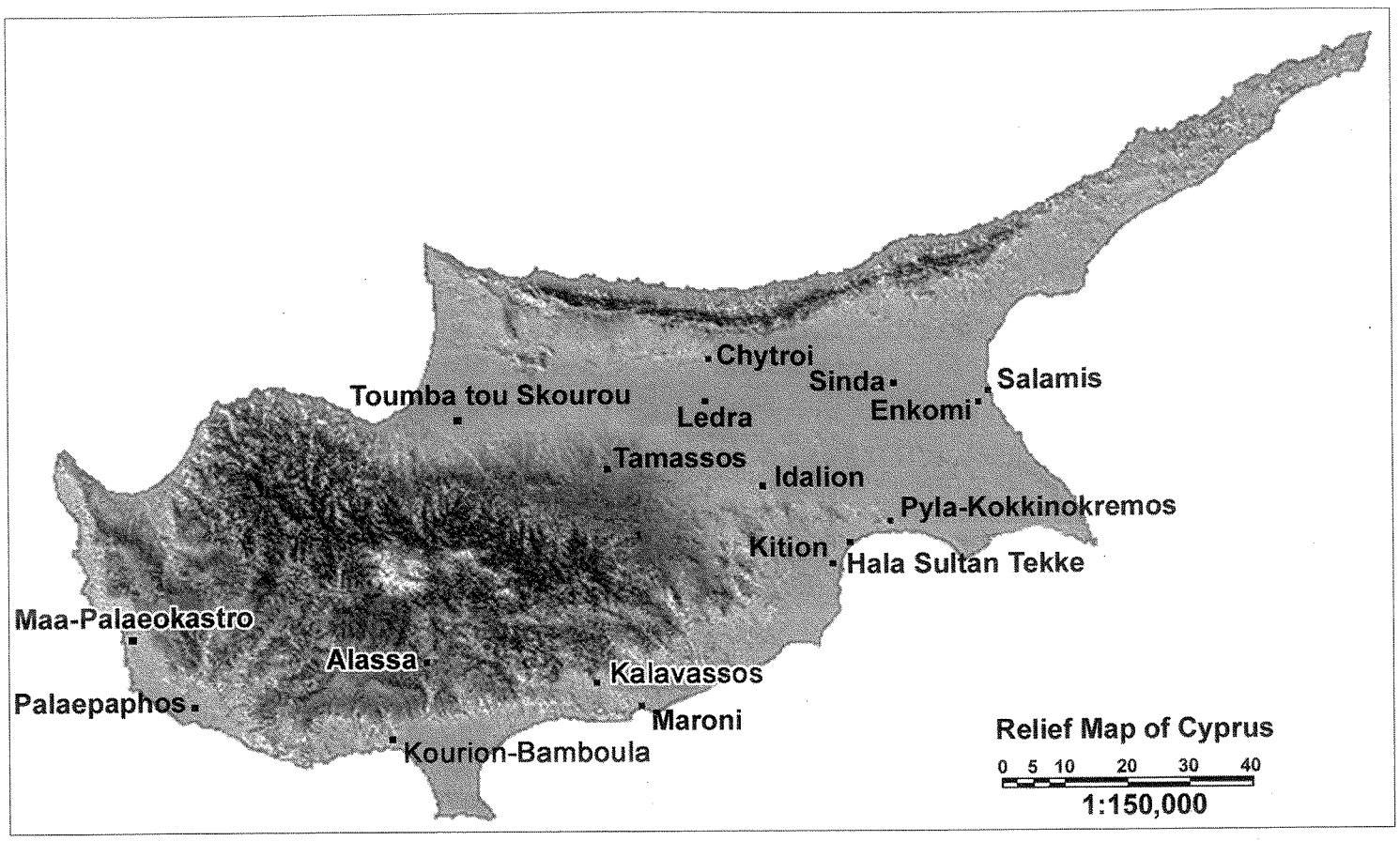

Fig. 1. Map of Cyprus with sites mentioned in the text.

towns? The answer, contained in a familiar reference, did not meet my expectations. Keswani relied on the work of other scholars, who had already relied on others still. This is standard practice in the field of archaeology; nobody denies that we have to rely on one another's research and interpretation of the material evidence. We do this not only out of respect and comradeship, but also because it is not possible for each one of us to go through a meticulous reanalysis of every piece of evidence. Nevertheless, this dependence has to be reviewed periodically, lest it become detrimental to the discipline, and especially to a young field in the discipline. Cypriot archaeology may not be that young a field any more, but the interpretative stage of the archaeology of Cyprus, despite the fact that it has developed in leaps and bounds over the last quarter century, has yet to rid itself of predetermined models built to accommodate other (as a rule, continental) environments. As long as "Urban Cyprus in the 14th–13th centuries B.C.E." (Negbi 2005: 6) continues to be approached on the basis of a model that "may be regarded as an insular version of Late Bronze Age city-states of the Levant and Mycenaean Greece" (Negbi 2005: 7), the chances are that less than the necessary investment of effort, and ever fewer research projects, will be directed to recording the development of the Late Cypriot settlements *on a one-by-one basis*. But no other approach will allow us to comprehend their diverse *histories*.

AN EXERCISE IN DECONSTRUCTION

I intend to go step by step through the deconstruction of some long-established "facts" on which most of us repeatedly rely, unaware of their weakness (fig. 1). I wish to ask in advance, therefore, to be pardoned by those colleagues whose work I shall inevitably appear to be criticizing, even if my preoccupation is with one specific (unfortunate) detail: tables or charts with settlement size estimates that have acquired disproportionate visibility in the scholarship. These charts have even overshadowed their "hosts," i.e., the thoughtful papers whose content has not lost its pertinence over a decade since publication. When I found it necessary to look into the issue of site size in Late Bronze Age Cyprus, my initial goals were admittedly very different, and I had no intention of

publishing this review.[1] I decided to do so only after I came to see the negative dynamics these originally well-meaning attempts had acquired. Not a year seems to go by without at least one publication reminding us that "LC IIC urban centers vary in size from 10 to 70 ha" (Negbi 2005: 3). It is an amazingly resilient pseudo-fact!

PALAEPAPHOS: 144 OR 65 HECTARES?

It all began with Palaepaphos (fig. 2). To use the words of Hector Catling, the history of the archaeological investigation of the landscape that embraces the famous sanctuary of *Kypris* (J. Karageorghis 2005)—the *Dea Cypria*, who was later in antiquity to be identified with Aphrodite—"has been uneven" (Catling 1979: 271). The extent (size) of the settlement, first, in the second millennium B.C., when it functioned as a Late Cypriot polity, and, second, in the first millennium B.C., when it became the capital of an Iron Age kingdom, is one of the key issues we are keen to target through a new project of the University of Cyprus, the "Palaepaphos Urban Landscape Project." Launched in 2006, the project is largely based on the "Archaeological Atlas of Palaepaphos," a pilot project initiated in 2002 by members of the Archaeological Research Unit (ARU) of the University of Cyprus in collaboration with the Institute for Mediterranean Studies of the Foundation of Research and Technology, Hellas (FORTH), in Crete.[2] The "Archaeological Atlas of Palaepaphos" is based on geographical information systems and geophysical surveys. It was designed primarily as a heritage management tool to assist in rescuing the cultural resources of Palaepaphos, which date from prehistoric to premodern times and are now threatened by development. The atlas tries to bring under one (digital) roof a vast amount of dispersed archaeo-cultural information, which can then be analyzed by different chronological and spatial layers. As long as it can be periodically annotated and updated, the atlas will become indispensable to field projects that target the "dark" or "gray" areas of this extensive archaeological landscape (cf. Sarris et al. 2006).

Palaepaphos was one of the first sites to draw the attention of the Cyprus Exploration Fund in 1888—a decade after the island had been ceded to Great Britain. A second British mission, the British Kouklia Expedition, went out to Palaepaphos in the early 1950s under the epigraphist Terence Mitford of the University of Saint Andrews and J. H. Iliffe, the Director of the Liverpool Museums (Catling 1979). In 1966 a Swiss-German Expedition took over and, besides investigating the sanctuary, it also excavated the Medieval cane sugar refinery—the finest industrial archaeology project to have been attempted in Cyprus to this day (Maier 1985: 4–6; Maier and Karageorghis 1984: 17–19). Meanwhile, ever since the 1960s, the Department of Antiquities has been conducting rescue digs, mostly of tombs, often on a daily basis, although tomb robbers work harder on a nightly shift. For references, see the annual *Chroniques des fouilles et découvertes archéologiques à Chypre* in the *Bulletin de Correspondance Hellénique*, under "Musée local de Kouklia Paphos."

After more than a century of field operations, "the city site of Late Bronze Age Palaepaphos still awaits excavation" (V. Karageorghis 1990a: 15). Not one house wall has been found of the Late Cypriot town that housed the society that established the sanctuary and constructed some of the richest Late Cypriot tombs ever found on the island (cf. Catling 1968; Maier and Karageorghis 1984: 51). Despite this unnerving reality, Late Bronze Age Palaepaphos has been described as a settlement that extends over 144 ha and, on other occasions, as a 65-ha Late Cypriot urban center. Interestingly, neither figure was put forward by Franz-Georg Maier, director of the Swiss-German Expedition, who has been working in Palaepaphos for four decades. I have traced the first to a paper by Robert Merrillees on "The Government of Cyprus in the Late Bronze Age," where he takes

[1] In 2001, when I was invited to participate in a Workshop on "Philistines and Other Sea Peoples," I attempted to provide a critical review of excavated remains that constitute factual evidence regarding the 12th-century horizon of Cyprus. The emphasis was placed upon a comparison of Late Cypriot settlement *histories*. A holistic, qualitative and quantitative, evaluation of the excavated material evidence per settlement revealed serious limitations in the archaeological record. The paper, entitled "Aegean-Style Material Culture in Late Cypriote III: Minimal Evidence, Maximal Interpretation," will appear in *Philistines and Other "Sea Peoples": Aegean-Style Material Culture in the Eastern Mediterranean during the 12th Century BCE*, edited by Ann Killebrew, Gunnar Lehmann and Michal Artzy, Society of Biblical Literature.

[2] The basic data for the pilot project was collected in the course of two short but intense seasons of fieldwork (2002–2003) made possible by the zeal and eager participation of my colleagues Vasiliki Kassianidou and George Papasavvas, our students Maria Dikomitou and George Papantoniou, and the collaborative spirit of Dr. Apostolos Sarris (Scientific Supervisor and Director of the Laboratory of Geophysical – Satellite Remote Sensing & Archaeo-environment) and his team from the Institute of Mediterranean Studies (Rethymnon, Crete).

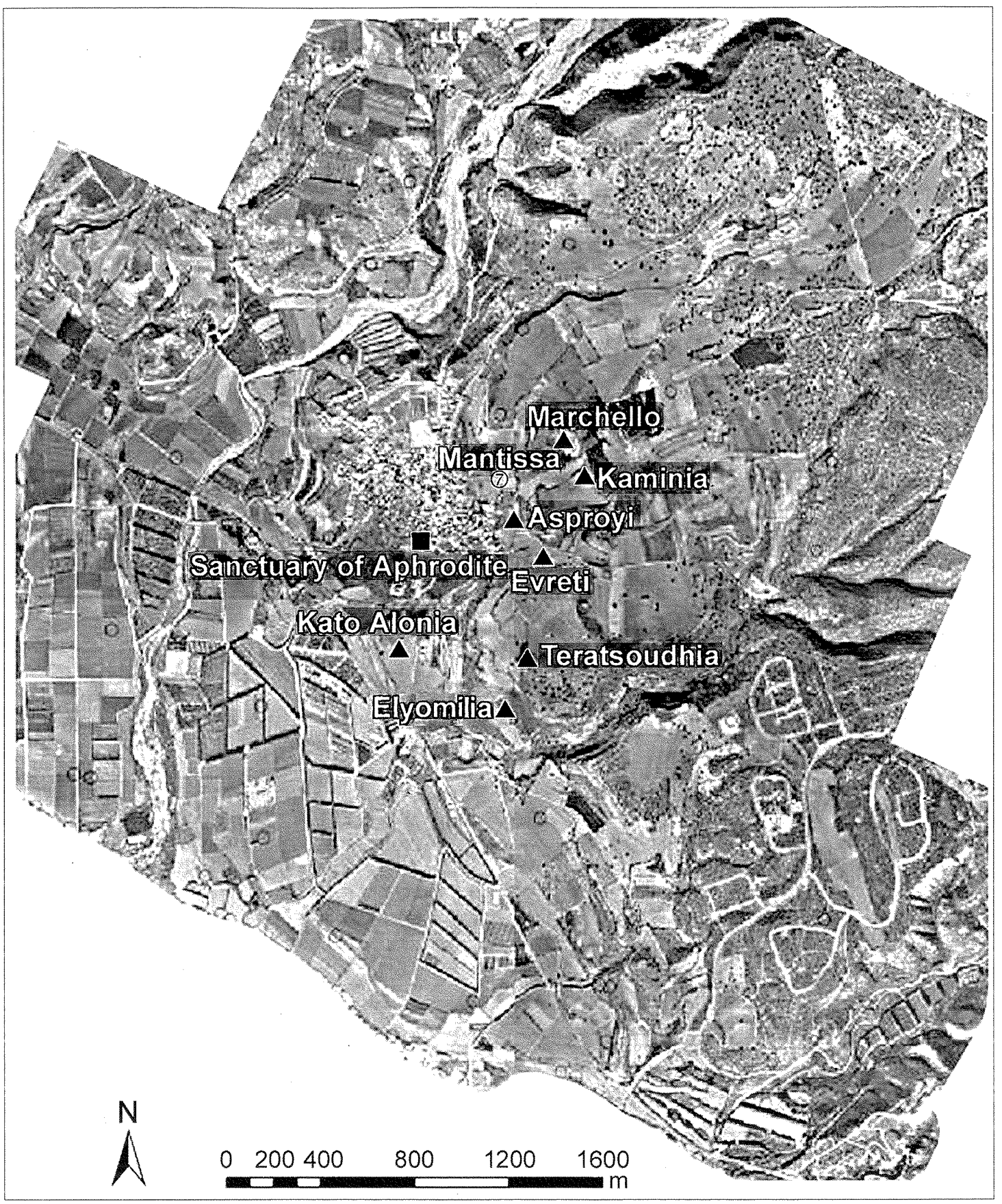

Fig. 2. Orthophotomap of the archaeological landscape of Palaepaphos in the Late Cypriot. (Copyright © The Archaeological Atlas of Palaepaphos Project.)

stock of Ora Negbi's (1986) definition of urban settlements: "Negbi's urban sites are all said to exceed 100 dunams (or 100,000 m^2) in area, while her non-urban sites occupy as a rule no more than 25 dunams (or 25,000 m^2)" (Merrillees 1992: 316). The question raised is, What about sites that may range from 25,000 m^2 (2.5 ha) to 100,000 m^2 (10 ha)?—but this is hardly the problem. As will be evident below, there is no consensus as to what exactly ought to be measured as part of an urban landscape (the spatial parameter) or which period in the course of a settlement's history this measurement ought to represent (the temporal parameter). In any case, in the idiosyncratic island environment of Cyprus, a specific minimum size should not be fixed a priori before exhaustive research that will allow the constituent characteristics of Late Cypriot urbanism to become clear. "For archaeologists it has to be function that is the important question" (Osborne 2005: 2), not size—a principle that Negbi has recently acknowledged (2005: 3).

Dr. Merrillees admits that "unfortunately few excavators have made any real effort to establish the size of the settlements being cleared, and most of the statistics at our disposal are little better than informed guesses" (1992: 316). He even states categorically that the dimensions of two of the largest, and potentially among the most important, Late Cypriot urban agglomerations [read Kition and Palaepaphos] are unknown; but he does not hesitate to add, "The cemeteries, building remains and wells of this period at Kouklia *Palaipaphos* extend over 1,200 metres from north to south . . . and could cover an equivalent distance from east to west . . . , occupying an area of up to 1,440,000 square metres . . ." (1992: 317). Thus Palaepaphos has been estimated as a settlement of 144 ha.

Given that to this day there is not a stone of settlement architecture in situ from this imaginary megasite, one is left gasping at his figure. The Late Cypriot settlement's spatial relation to the impressive temenos wall of the sanctuary is no more than a guess. Basically, our knowledge of the (invisible) Palaepaphos settlement relies on a surmise from Late Cypriot wells in the localities of *Asproyi* and *Evreti*, "filled with a large amount of storage vessels, animal bones, ivory waste, and household objects" (Maier and Wartburg 1985: 147), to which another well from *Teratsoudhia* (V. Karageorghis 1990b: 71–73) has been added. Merrillees' estimate, besides ignoring the constraints of the terrain within these 144 ha, takes for granted that the wide (but rather thin) scatter of tombs and wells with Late Cypriot material defines the limits of a single, nucleated urban settlement.

This assumption is shared by a number of scholars. Two years before, Vassos Karageorghis had written that "the living and working quarters of Late Bronze Age Palaepaphos covered not only the *Evreti* area but extended as far south as *Teratsoudhia*" (1990b: 73). As for *Elyomilia* Tomb 119, 700 m to the southeast of the sanctuary, Karageorghis states: "It constitutes the southernmost tomb in the vast cemetery of this period . . . comprising *Marcellos* at the northernmost part and including the sites of *Mantissa*, *Kaminia*, *Asproyi*, *Evreti*, *Teratsoudhia*, terminating at *Eliomylia*. This is a vast area, almost 1.5 km in length, and is indicative of the size of the city to which the cemetery belonged" (1990b: 77).

The topographical distribution of LC I–III evidence from tombs within the archaeological "region" of Palaepaphos is not sufficient to establish that the area delineated by *Marchello* to the northeast (note that all compass references are in relation to the sanctuary), *Evreti* to the east, *Teratsoudhia* and *Eliomylia* to the southeast, plus another 1200 m to the west had developed into a sizable city, which was surrounded by one extensive and continuous cemetery. We *cannot* argue that this area had been incorporated into a unified system of habitation; or that it was not interrupted by agricultural land, or simply vacant land. In fact, the wells at *Evreti* and *Teratsoudhia*, two very distinct locations and quite far apart from each other, contained settlement material of LC I–IIIA (V. Karageorghis 1990b: 73). Can we claim that in LC I, the initial date of its establishment, Palaepaphos, which was literally a non-site in the Early and Middle Cypriot (cf. Maier and Wartburg 1985: 145–46; Diacopoulos 2004; Georghiou 2007), expanded overnight to cover an area from *Evreti* to *Teratsoudhia*? Or is it more likely that there were, especially at the beginning, several settlement nuclei?[3]

As the matter stands, we do not know the basic architectural layout of the town of Palaepaphos, even during the climax of urban development in LC IIC;

[3] Viewshed analysis confirms that *Evreti* is not visible from *Teratsoudhia* and vice versa (Stamatis 2005: 223–24, 229–30)—unless one is standing on a structure 6 m high and, even then, only partially.

nor do we have information regarding the extent of the agricultural and industrial regions under its immediate control, the *chora*, so to speak, of Late Bronze Age Palaepaphos. There are no straightforward or easy answers to these basic research questions; claims to the opposite should be viewed with caution.

TWO CHARTS WITH SITE SIZE ESTIMATES

An appendix on "Late Cypriote Site Areas in Square Metres" at the end of Merrillees' paper (1992: 328) tabulates the size of seven settlements as determined by various scholars. Estimates for the walled town of Enkomi, for instance, range from 12 to 16 ha. Merrillees claims that "the sizes quoted represent habitation at its greatest extent in the Late Cypriote period" (1992: 319). Here, however, lies a *culpa* in methodology because the criteria used to estimate the size per site are highly diverse. For instance, one should not compare the precisely defined area of walled settlements, such as Enkomi or Sinda, to a spread of cemeteries and wells which, when put together, do *not* disclose the urban nucleus of a site like Palaepaphos. In the former case, the area outside the walls—*extra muros* cemeteries, sanctuaries, industrial installations, etc.—that represents land used by the inhabitants of the walled settlement is not taken into the estimate. In the latter, estimates are not based on knowledge of the urban fabric but on the maximum spread of tomb clusters and wells, whose relation to a single settlement at a specific point in time remains unclear or has yet to be established.

Closing an important paper (Merrillees 1992) with such an appendix was a faux pas but, fortunately, the negative consequences were limited: the estimates did not draw more attention than the content of the paper. But a different chart, one I have traced to what I continue to value as a "classic" paper by A. Bernard Knapp on "The Prehistory of Cyprus: Problems and Prospects" (Knapp 1994: 417, fig. 13), is responsible for giving the site size issue greater and, certainly, dangerous proportions. It reappeared in an expanded form (the former bar chart includes 21 sites, this one 23) in "Settlement and Society on Late Bronze Age Cyprus: Dynamics and Development" (Knapp 1996a: 80, fig. 3). Through repetition in the author's own work, this chart has been widely disseminated and was quickly adopted by a younger generation of scholars (e.g., Smith 1994: fig. 38)—hence Keswani's, and, more recently, Carol Bell's (2006: 76, table 14) faith in these figures.

If one consults Knapp's chart, one sees that Palaepaphos (Kouklia) has acquired more modest dimensions than in Merrillees's estimate. At 65 ha, it is described as "the major settlement centre in this area during the LC period" (1996a: 61). Curiously, however, *Mantissa*, *Evreti*, and *Kaminia* are defined as outlying localities ("Like many Late Cypriot settlements, Palaepaphos was probably supported by outlying localities [e.g., *Mantissa*, *Evreti* and *Kaminia*]"; Knapp 1996a: 61), despite the fact that, to come up with a settlement that extended over 65 ha, the author must have counted them in as parts of the urban center. Anyone who has been to the area and has walked the track from the sanctuary to *Mantissa*, *Evreti*, and *Kaminia* knows that once these localities are defined as *outlying*, nothing much will be left for *in-lying* other than the site of the sanctuary itself (see published plans by Maier; cf. Maier and Wartburg 1985: 147, fig. 2). They are the nearest Late Cypriot locations to the sanctuary which, rightly or wrongly, we continue to see as the monumental centerpiece of the Paphian polity. By contrast, the *Eliomylia* and *Teratsoudhia* localities do not share "boundaries" with the sanctuary, as other localities (e.g., *Kato Alonia*) lie in between.

A year later, in *The Archaeology of Late Bronze Age Cypriot Society*, Knapp included an almost identical "Bar chart of Cypriot settlement sizes in hectares" (1997: 53, fig. 5). This time the list is accompanied by an important qualifying statement: the author explains that he has chosen the minimal size from various sources and that estimates for half the sites (11 out of 23) have been made from published site plans (1997: 55). As we look down the list of these variably estimated sizes, we cannot fail to notice that, once again, the same two sites appear to be monstrously large by comparison with all the rest. Kition is estimated at 70 ha and Palaepaphos at 65 ha, while third place is claimed for Maroni at just 25 ha, which, nonetheless, renders it twice as large as Enkomi. The 12–16 ha enclosed within the walls of Enkomi make a minnow out of the great old city, which is still being championed as the administrative center of an early state with island-wide authority. Admittedly, size should not become the decisive factor that will tip the scales in favor of this or that settlement so that it may be identified as the elusive Alashiya—the otherwise invisible (on the ground

of Cyprus) capital center of a presumably unified Late Cypriot state. One cannot forget Merrillees' sound remark that "size is not, today at least, an infallible guide to relative political weight" (1992: 318), which is based on the analogy of three modern capitals—Brasilia, Canberra, and Washington.

Nevertheless, something peculiar seems to be happening with these Late Cypriot site size estimates, and we need to go to the root of this dubious construct. If any doubt remains as to the misleading character of the information they convey, it ought to be waived once one notices that Enkomi, to which Knapp allocates 16 ha, is shown to be as extensive as Morphou-*Toumba tou Skourou* (Knapp 1997: 54–55). The latter's extent (15 ha) must have been estimated on the basis of Hector Catling's assessment: "The surface indications, however, suggest a site approaching the size and importance of Enkomi" (Catling 1962: 142). The student of Cypriot archaeology who has had a chance to study the final publication (Vermeule and Wolsky 1990) cannot but ask, 15 ha of what? This terribly important but most unfortunate site had been thoroughly bulldozed and turned into orange groves (Vermeule and Wolsky 1990: 3–5; also *frontispiece* with air view) before the only surviving area, an "archaeologically perplexing industrial mound" and the six tombs it contained (Vermeule and Wolsky 1990: 7), could be excavated. The "ancient site was reduced to a length of 66 meters from east to west, and a breadth of 36 meters from north to south" (Vermeule and Wolsky 1990: 7, fig. 2). It is this harsh reality that led the excavators to state that "whether *Toumba tou Skourou* was, in the Late Bronze Age, indeed the 'Enkomi of the west' will never now be known" (Vermeule and Wolsky 1990: 7).

MARONI: 25 HECTARES OF WHAT?

Let us look next into the estimate for Maroni. Where is this 25-ha-large settlement? Apparently, Professor Knapp added up the area that lies between Maroni-*Vournes* and Maroni-*Tsaroukas*. This, however, does not interpret the results of the field projects correctly. At *Vournes* there is a massive ashlar complex, described as a ruling building which contained an industrial installation (Cadogan 1996: 17–18). Despite its apparent association with the greater region, this LC IIC elite complex is not joined to the coastal remains at *Tsaroukas* by a continuous settlement fabric. Between the two sites (as much as 400 m apart), evidence of contemporary occupation has not been found. "It has long been noted by Gerald Cadogan that the Ashlar Building complex at Maroni-*Vournes* lacked any apparent associated settlement" (Manning and de Mita 1997: 128). Survey of the surrounding landscape has shown, however, that Maroni-*Tsaroukas*, Maroni-*Vournes*, and three further locations around and between them belong to one large, albeit dispersed Late Bronze Age site (Manning and de Mita 1997: 126). These locations are 250–400 m from each other: hence, the conclusion that "the intervening landscape was not uninterrupted" (Manning and de Mita 1997: 128).

Instead of rushing to elevate Maroni into a settlement that extended over 25 ha at one time or another—when, in fact, the different locations appear to have remained to the end functionally combined but relatively discrete areas within the greater site (Manning and de Mita 1997: 128)—it could be more rewarding to pay closer attention to how the character of *Vournes* and *Tsaroukas* changed during the Late Cypriot. This change reveals key stages of the urban process in the Maroni Valley and allows us to conjecture that eventually, but not before LC IIC, a dominant authority was established at *Vournes* (Cadogan 1996; Manning and Monks 1998: 350).

ALASSA: 12.5 HECTARES?

If we can agree that we need to take "steps towards a holistic and regionally based study of the overall LC polity surrounding the previously isolated and lonely administrative-ruling centre of Maroni-*Vournes*" (Manning 1998: 54), then a similar region-specific approach may be useful at Alassa. There, too, Knapp has come up with a site of 12.5 ha by including the distance between Alassa-*Paliotaverna* and Alassa-*Pano Mandilaris*, though he notes that they are "about 500 meters distant from each other" (1996a: 61). The excavator of Alassa calculates that "the lower part of the settlement" is 250 m away (Hadjisavvas 1996: 32). One ought to note that Hadjisavvas clearly describes the remains of the great buildings at *Paliotaverna* as being outside the settlement and on a higher commanding position, at an altitude of 260 m, whereas the settlement at *Pano Mandilaris* is at 240 m (Hadjisavvas 1989: 34). To

this day, the two excavated areas cannot be claimed as structural parts of a unified settlement plan. In fact, the currently available evidence reflects a duality, or separation of roles, as in the Maroni Valley. Sited either side of a 4-m-wide street (Hadjisavvas 1996: 30), the two ashlar buildings at *Paliotaverna* may have been purposefully isolated from the settlement at *Pano Mandilaris*, just as the Ashlar Building of Maroni-*Vournes* was separate from the coastal settlement of Maroni-*Tsaroukas*.

The bottom line is that it is methodologically invalid to compare Maroni or Alassa to the size of an *intra muros* site—such as Enkomi, for example—because they represent different types of settlements—settlements whose paths toward urbanization were far from identical. Between LC I and LC IIC (the latter being the climax of urban development), these different paths, whose imprint upon the landscape is not always clearly visible, resulted in different types of urban establishments and different degrees of urbanism. Treating Late Cypriot settlements as if we have established their conformity to an identical urban development process, which culminates in a homogeneous urban town model, promotes a dangerous pseudo-fact that works against the better interests of our research. We should also refrain from seeing too much in the (possible) similarities—hinted at above—between the Maroni and the Alassa settlement patterns until the investigation of their respective archaeological landscapes can be deemed finished. For instance, one would very much like to know where the wide street "uncovered to a length of 43 m" (Hadjisavvas 1996: 30) at *Paliotaverna* leads. Is there any chance that it provided access to the settlement at *Pano Mandilaris* below? Such a spine of communication between central building and secondary urban structures has been identified at the contemporary settlement of Kalavassos-*Ayios Demetrios*.

KALAVASSOS-*AYIOS DEMETRIOS*: 11.5 HECTARES

The size of Kalavassos-*Ayios Demetrios* on Knapp's list has not been estimated from site plans. He quotes, instead, a sensible estimate put forward by the excavator. When Alison South states that *Ayios Dhimitrios* is a settlement covering about 11.5 ha (1989: 319; 1996: 39; 2002: 60), she is relating hard evidence from her excavation. Various parts of the site have been excavated, which represent about 5 percent of the total area, and substantial stone buildings, all with the same orientation, have been found (South 1989: 319). Several fairly large, multiroom buildings front onto at least one long, straight street (about 3.80 m wide), which leads north toward a large public building, the famous Building X (South 1996: 41). This is clearly a settlement type, which in LC IIC did not resemble its neighbor at Maroni or the more distant settlement at Alassa. *Ayios Demetrios* provides sound evidence for an LC IIC town with a high degree of organization, on a grid system, which has been traced around, and connected to, a monumental ashlar building. Thus, 11.5 ha is a modest estimate for the settlement's "urban sprawl," despite the fact that the town is not enclosed within a defensive wall.

THREE LATE CYPRIOT TOWNS ON A GRID

Walls or no walls, Enkomi-*Ayios Iakovos* and Kalavassos-*Ayios Demetrios* were laid out on a grid system and shared similar principles of urban planning, with domestic quarters built along long, straight streets provided with good drains (South 1996: 41). Enkomi is, in fact, the only Late Cypriot settlement on the island that can be considered adequately excavated (fig. 3). Nearly one-sixth of the walled town has been dug, vertically and horizontally. The space (400 m NS × 350 m EW) enclosed within Enkomi's monumental rampart is about 140,000 m^2. Do we know of another Late Cypriot settlement on a grid system, and how big it is?

Hala Sultan Tekke: 24–27 Hectares?

By the Larnaca salt lake and the mosque of Hala Sultan, Paul Åström has been excavating a Late Cypriot town laid out on a roughly rectilinear grid system, "a so called 'Hippodamic' town plan with streets at right angles" (Åström 1996: 10). Like Kalavassos-*Ayios Demetrios*, Hala Sultan Tekke (or Dromolaxia-*Vyzakia*) has no evidence of a defensive wall. To be precise, in the 1970s the impression was different. In the introduction to the first volume of the *Hala Sultan Tekke* series, Professor Åström wrote that "[t]he town wall has not yet been found, but large Cyclopean blocks which are not in situ have

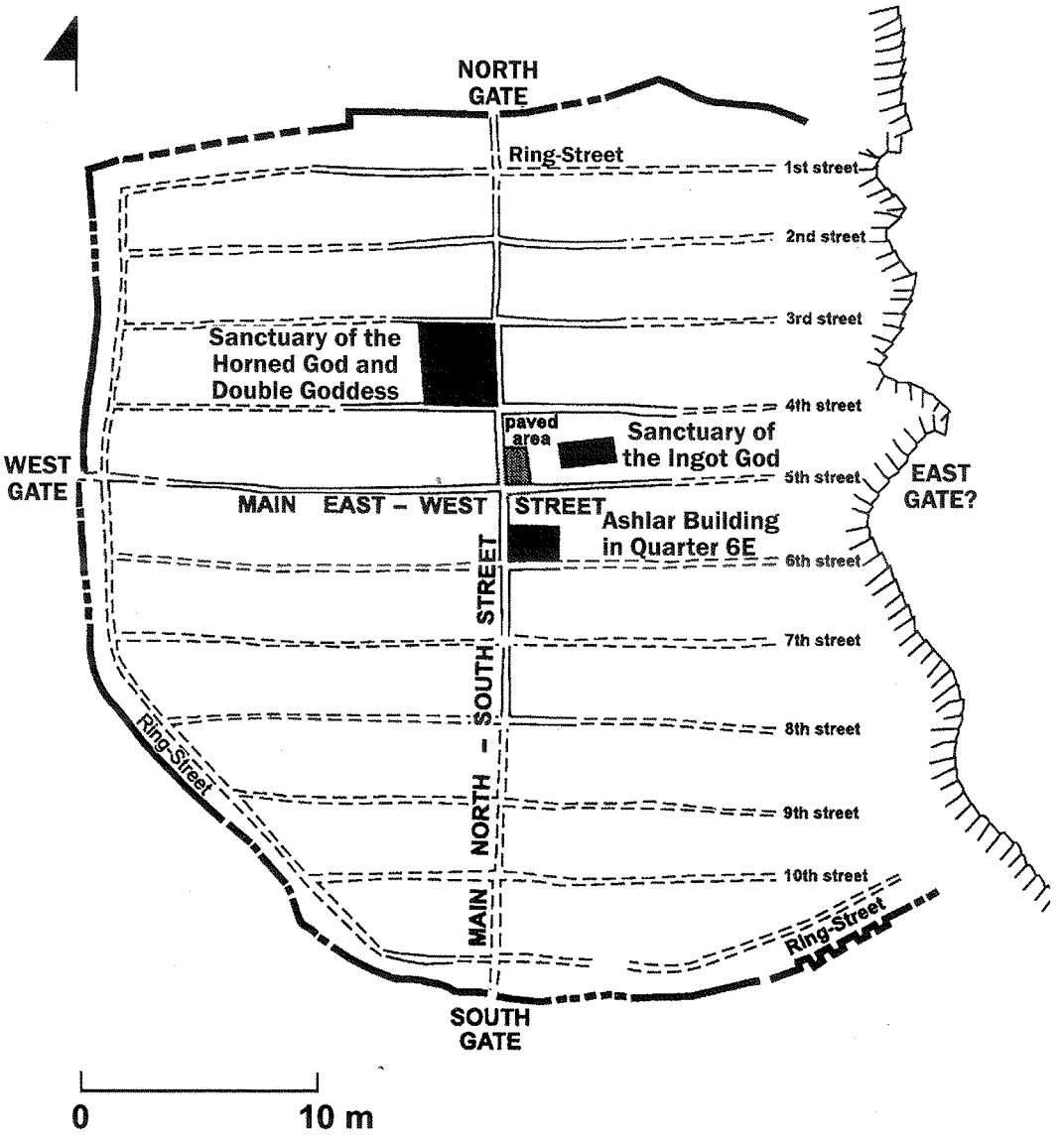

Fig. 3. Ground plan of Enkomi. (Reproduced by kind permission from Jennifer Webb 1999.)

been observed in the area" (Åström, Bailey, and Karageorghis 1976: iv). After two decades of fieldwork, this expectation has been abandoned but, in the meantime, Stuart Swiny, in a discussion on walled settlements, wrote that, by contrast with Kition, "the contemporary city walls at Enkomi *Ayios Iakovos* and Hala Sultan Tekke protected smaller townships in comparison; the former measured 12 ha and the latter, as estimated by Åström, was 27 ha" (Swiny 1981: 78).

Hala Sultan Tekke is fourth (after Maroni) on Knapp's list. However, the 27 (Åström 1986: 8) and later 24 (240,000 m^2: Åström 1996: 10) ha claimed for Tekke do not represent the extent of the Late Cypriot town. But, as with Palaepaphos, they do represent the maximum spread of Late Cypriot tombs and possibly industrial or special function zones—"copper slag was found almost everywhere in the course of the topographical survey" (Åström, Bailey, and Karageorghis 1976: iv)—which mark an area of 600 × 460 m (Åström, Bailey, and Karageorghis 1976: iv–vii). Within these 24–27 ha, the architectural evidence for the Late Cypriot town, the excavated remains of which date exclusively to LC IIIA (cf. Åström 1985: 174), is extremely limited (see the "contour map" in Åström 1989: fig.2). Thus, it is misleading to conclude that Tekke was a considerably larger Late Cypriot urban center than either walled Enkomi or unwalled Kalavassos-*Ayios Demetrios*. To do that is to contrast entities whose spatial and temporal characteristics are not directly comparable.

The Enkomi-Salamis Landscape

The pre-1974 archaeological maps of the landscape around Enkomi (e.g., V. Karageorghis 1969: 15, plan 1), which continued to be reprinted in post-1974 publications (e.g., Yon 1980: 17, pl. 3), indicate only the monuments of its successor. The capital of an Iron Age kingdom and, later, a Graeco-Roman city, Salamis was founded in the 11th century B.C.E. as a new port town closer to the sea (Iacovou 2005a: 25). On these maps, the walled sector of Enkomi appears like a Late Cypriot landmark from bygone days forgotten on a plan dotted with the rich remains of the new town. Had Enkomi—and all other sites that lie within the occupied northern part of the island following the Turkish invasion of 1974—not become inaccessible to legal (according to UNESCO resolutions) archaeological projects (cf. Knapp 1994: 432–33; Knapp and Antoniadou 1998; Iacovou, ed. 2004: 16), an intensive survey of the landscape beyond its walls would have been a top priority. Built in LC IIC (probably late in the 13th century), the "cyclopean" rampart was a very late addition to the life of the town which was founded on virgin soil back in MC III/LC I (late 17th century). Yet, the only Late Cypriot Enkomi tombs we know are those found *intra muros* by British, Swedish, French, and Cypriot excavators (for an assessment of their numbers and types, consult Keswani 2004: 189, table 3.2). Are we ready to claim that they represent the totality of the urban population's mortuary needs for half a millennium (from the 17th to the late 12th century, when Enkomi was finally abandoned)? Or, is it more than likely that beyond the walls there may have been not only more Late Cypriot tombs but also sections of the settlement that were eventually left outside the walls? The development of the urban fabric of Enkomi before it was confined within an LC IIC defensive system, as well as the use pattern of the area directly outside it, which must have continued to interact on a daily basis with the LC IIIA town during the 12th century, are unknown factors.

Enkomi *extra muros* remains terra incognita and, needless to say, has never been considered in any size estimate for the town. This, however, is in stark contrast to the size estimates for contemporary Hala Sultan Tekke, where the LC IIIA settlement remains are interpreted as part of a 24-ha-large urban center, despite the fact that the tomb clusters that provide this estimate are all earlier and were no longer in use in the 12th century. In her discussion of the "Archaic State Model," Jennifer Webb has drawn attention to the discrepancies between the urban data sets: "estimated site areas of Enkomi, Kition and Hala Sultan Tekke are based on the maximum extent of settlement in LC IIC and LC III. . . . They tell us little or nothing of the status of Enkomi within a regional or island-wide settlement hierarchy in the C16th, C15th and early C14th" (Webb 1999: 305).

LATE CYPRIOT SETTLEMENTS WITH FORTIFICATION WALLS

As the evidence now stands, the LC IIIA walled sector of Enkomi can be compared in size only with the walled sectors of three other contemporary settlements: Sinda, Maa, and Kition.

Sinda

Situated in the Mesaoria Plain 15 km from Enkomi, Sinda is a Late Cypriot walled settlement (250 × 200 m) with an 800-m-long "cyclopean" rampart. We know close to nothing about the character of this inland establishment, since only a fraction was excavated by Arne Furumark in 1948 (consult the ground plan in Furumark 1965: 103, fig. 3). "The area within the City Wall forms an irregular polygon with an extension of approximately 46,500 square meters" (Furumark and Adelman 2003: 26), which is less than 5 ha or slightly less than the size quoted by Merrillees (1992: 328) and Knapp (1994: 417). The unanimous impression is that Sinda was not a primary urban center but rather Enkomi's protégé. It could have been established as a fortress in order to guard the copper route and also to protect a rich agricultural region that was Enkomi's vital hinterland (cf. V. Karageorghis 1990a: 12–13; also, Åström in Furumark and Adelman 2003: 71). Late in the 12th century it shared Enkomi's fate: both were abandoned in LC IIIA (Furumark 1965: 115–16; Furumark and Adelman 2003: 46, 64–65, 73).

Maa

Maa-*Palaeokastro* was founded at the end of LC IIC on a long, narrow promontory 26 km west of Palaepaphos. It has a 50-m stretch of a "cyclopean" wall on the landward side; the seaward side of the wall is barely discernible (Karageorghis and Demas 1988: 50). The total area protected by this monu-

mental rampart is approximately 46,000 m^2 (Karageorghis and Demas 1988: 1). Thus, it is of equal size to the walled settlement of Sinda.

Enkomi

Enkomi (Floor IIB), Sinda (Floor I), and Maa (Floor II) have in common massive walls constructed in a similar technique (Dikaios 1969–1971: 486, 512, 909–10). Hitherto unknown in Cyprus, this particular type of defensive architecture was introduced in the 13th century. In spite of the fact that the construction of these "cyclopean" ramparts is dated to the same cultural horizon, which is identified as "the final phase of LC IIC" (Karageorghis and Demas 1984: 68–69), the town of Enkomi itself is a much older establishment. Likewise, a settlement is suspected to have existed at Sinda prior to the construction of its monumental circuit wall (Furumark 1965: 105) and, as we shall see shortly, the same is valid for Kition. Thus, of the four fortified sites, Maa-*Palaeokastro* alone was founded from scratch as a walled settlement. This new, and short-lived, Late Cypriot site is the only one to have had a "cyclopean" wall from its beginnings (Karageorghis and Demas 1988: 261). Here we see much of what is truly special about Maa-*Palaeokastro*, and what, in the end, may be the decisive factor in the interpretation of its function (Karageorghis and Demas 1988: 261–66; V. Karageorghis 2001: 3).

The "Siblings": *Maa*-Palaeokastro *and Pyla*-Kokkinokremos

Before moving to the fourth Late Cypriot walled town, Kition, it is worth bringing into the discussion the site that is considered Maa's "sibling"—not because it has a cyclopean rampart but because, like Maa, Pyla-*Kokkinokremos* bears the marks of a singularly short-lived site, which was founded at the end of the 13th century B.C. and persisted for only a few decades before it was abandoned (V. Karageorghis 1990a: 10). Fewer than 10 km away from Kition, the rocky plateau of *Kokkinokremos* rises steeply from the lowlands. From the top one has a magnificent view of Larnaca Bay and the coastline, which is 800 m from the foot of the hill (Karageorghis and Demas 1984: 3–5). It is thus puzzling why Knapp originally paired Pyla-*Kokkinokremos* with Sinda, describing them as "inland towns or villages" (Knapp 1994: 425). Fortunately, shortly afterward, *Kokkinokremos* was paired with Maa and the two described as relatively short-lived, special-purpose sites (Knapp 1996a: 62).

On the plateau the area excavated is barely over 1000 m^2 but, according to the excavators, "a surface survey has shown that the entire plateau was inhabited" (Karageorghis and Demas 1984: 4–5). From the plateau's maximum dimensions, given in print as 600 × 450 m, *Kokkinokremos* could be estimated as a settlement extending over as much as 27 ha, and therefore many times larger than Maa. My initial reaction to this figure is that, for a settlement that did not last as long as 50 years (its life cycle is even shorter than that of Maa), this is not very likely. Knapp (1997: 540) notes 2.7 ha and, though it could be a printing error, it seems at first glance as a more credible estimate. However, we need to pay closer attention to how this very large space may have been utilized. Karageorghis and Demas (1984: 26) tell us that the architectural scheme of the excavated units suggests that the settlement did not grow gradually: the whole operation was planned and executed at one time as a highly organized communal endeavor. What was this?

The site commands a superb view of the sea and the fertile plain but, geologically speaking, there is no possibility that it had wells (Karageorghis and Demas 1984: 26, 95). Its founders, then, did not choose it to set up a long-lived and prosperous urban center. They obviously had another, specific objective in mind. In fact, the houses—estimated as at least 200 units (Karageorghis and Demas 1984: 24)—were built along the edge of the plateau, forming a continuous outer wall which has been described as "the fortification wall" (Karageorghis and Demas 1984: 23). The space within could have been, for all we know, completely free of house structures.

The 27 ha of the plateau should not, then, be interpreted as 27 ha of built-up space; nor should they be compared naively to the "small" size of the urban fabric of Enkomi or *Ayios Demetrios*. Far from being similar, they are very different types of settlement. The massiveness of the *Kokkinokremos* building project, and the speed with which it was executed on Kition's threshold (the closest known urban polity), are bewildering—as bewildering as the settlement's sudden abandonment, which forced its inhabitants to leave behind—and never reclaim—many hoards (Karageorghis and Demas 1984: 60), including a pair of silver ingots (Karageorghis and Demas 1984: 64). Pyla means "gate" (Karageorghis and Demas 1984: 5;

V. Karageorghis 2001: 2). The establishment of this special-purpose site on the *Kokkinokremos* plateau guarding a gate (the Pyla pass) may not be unrelated to land claims and the drafting of boundaries between the LC IIC–IIIA polities. Is it not a viable scenario that whoever had found it necessary to invest in the establishment of *Kokkinokremos* at the end of LC IIC in order to define and defend its boundaries, lost it soon afterward, at the beginning of LC IIIA, to another claimant who established a new frontier? The original inhabitants were, thus, deterred from returning to reoccupy the plateau they had abandoned and from retrieving the metallic hoards they had hidden.

Kokkinokremos will retain a pride of place in any attempt to approach the dramatic events of the 12th century in Cyprus which, in spite of their low visibility in the material record, brought about profound changes that determined the island's historical trajectory in the first millennium B.C. (Iacovou 2005b: 127). Nevertheless, we should exclude *Kokkinokremos* from any discussion of the *development* of urban centers in Late Bronze Age Cyprus—because it did not undergo any development. *Kokkinokremos* and Maa (the former more than the latter) are time capsules (Iacovou 2007a). Their material record encapsulates 12th-century region-specific episodes, which open windows onto the island's turbulent but successful passage from the Late Bronze to the Early Iron Age.

Kition: A 70-Hectare Walled Megasite?

The short period between the establishment and abandonment of *Kokkinokremos* coincides with the time when a monumental state-managed operation, of an outstanding urban character, was carried out at Kition: the construction of the great temple and the contemporary construction of the "cyclopean" rampart. In 1981 Swiny wrote that "If dimensions are any indication of importance and if the outline of the ancient city wall at Kition is accurate, it is then unquestionably the largest Bronze Age town in Cyprus, with an area of over 70 hectares" (1981: 78). With this, we return full circle to our number one Late Cypriot megasite, which is even larger than Palaepaphos. Unlike Palaepaphos, however, the estimate for Kition is based on the space of land enclosed within a city wall. Is this wall real, or (at least partly) hypothetical?

The excavated area of the Late Cypriot settlement of Kition is close to 6000 m^2 and almost entirely concentrated in the temples' precinct (Area II) at Kition-*Kathari*, where 5265 m^2 were excavated (Karageorghis and Demas 1985: 24)—as opposed to an excavated sector of only 374 m^2 with domestic units in Area I (Karageorghis and Demas 1985: 5, 23). The excavations show that Kition had a mudbrick rampart, which was replaced by a "cyclopean" wall of conglomerate blocks at the beginning of the 12th century. A stretch of 125 m of this wall was excavated in Area II and another 15 m in Area IV, closer to Kition-*Bamboula* (Karageorghis and Demas 1985: 86).

What about the rest of the line of this Late Cypriot city wall? It is assumed that it followed the irregular perimeter of the low plateau (600 × 1500 m) on which the settlement was built (Karageorghis and Demas 1985: 4), and thus the size of the 12th-century urban town of Kition has been estimated at 70 ha. To quote the excavators, the wall as reconstructed "encloses a long irregularly shaped area of approximately 700,000 sq.m. which constitutes the LBA town of Kition" (1985: 86). However, the late Kyriakos Nicolaou, who documented the course of the Kition rampart in his study on the topography of Kition (1976: 52–63), concludes with the following after a careful analysis of the evidence: "It is not yet possible to determine with certainty the extent of the Late Bronze Age city-wall of Kition" (1976: 63). Three decades later, in a lucid, up-to-date analysis of the evidence on "les limites de la ville et ses fortifications," Marguerite Yon (who has been excavating Kition-*Bamboula* since the mid-1970s) prudently avoids size estimates for any period in the long history of Kition (Yon 2006: 65–70).

The main reason I think that the 70-ha estimate for the LC IIC–IIIA town of Kition is suspect is not only that the figure is significantly out of scale in comparison with other Late Cypriot towns. Late Cypriot remains have not been reported (in print), to my knowledge, from the southern half of the plateau; and we should keep in mind that the settlement of Kition was, apparently, not nucleated into an urban polity long before the 13th century. In fact, it acquired importance as a port of export for the south coast only after the harbor of Hala Sultan Tekke had begun to malfunction. Indeed, by 1000 B.C. (Åström 1985: 175), this major port, which had served as the port of entry for elite goods from the beginning of the Late Cypriot (Åström 1985: 174), had become

the salt lake of Larnaca (Gifford 1980), while Kition maintained a commercial port until the Roman period (cf. Yon 2006: 129–42).

Even if population groups from Hala Sultan Tekke were being absorbed by a rapidly expanding Kition, I retain serious reservations about any implications that a new town could have grown into an urban nucleus so extensive as to require the construction of a rampart enclosing 70 ha. Here I am not alone. In 2002, Alison South cited as forthcoming a paper of hers entitled "The Size of Late Bronze Age Kition: A Factoid" (2002: 70). The line of the Kition wall, to the extent that it has been documented by Nicolaou, may represent the maximum growth of the Iron Age urban center during the age of the Phoenician kingdom in the fourth century B.C., but it is highly unlikely that it constitutes the Late Bronze Age town of Kition.

Swiny (1981: 78), Merrillees (1992: 328), Knapp (1996a: 80), Keswani (2004), and other scholars working in Cyprus take it for granted that Kition had grown into a megasite during the Late Bronze Age, and new doctoral theses (e.g., Crewe 2004: 126–27) have fallen into the same Late Cypriot site-size trap. Hence, colleagues further afield see Enkomi as one of the smaller coastal towns of Cyprus (e.g., Bunimovitz 1998: 104) because of Kition's promotion as a 70-ha walled town. It is not difficult to see how much damage this pseudo-fact inflicts upon attempts to interpret Late Cypriot state models. Suffice it to say that one of Keswani's arguments (1993: 75) against the island-wide polity model, and specifically against a settlement hierarchy centered on Enkomi, rests on the belief that the estimated site areas for Enkomi, Kition, and Hala Sultan Tekke are 11, 70, and 27 ha, respectively (aptly pointed out in Webb 1999: 305)—hence Keswani's statement that Enkomi was "dwarfed by Kition and Hala Sultan Tekke" (1996: 234).

SITE STRUCTURE AS A GUIDE TO SITE HISTORY

Let us now turn to the underlying critical issue: site structure, not site size, is more likely to provide the best insight into site *history*. How have we come today to an (almost unanimous) agreement that "the associated patterns of urbanization and internal organization were diverse" (Keswani 2004: 154)? To the extent (admittedly, limited and uneven) that Late Cypriot settlements have been investigated, this diversity is in each case strongly expressed by means of archaeologically tangible and measurable characteristics. Among the most prominent of these are ashlar buildings, streets and drains, fortification walls, communal cult establishments, olive oil installations, industrial sectors for copper refining or pottery production, workshops for specialized craftsmanship (e.g., ivory carving), imported objects of status, and evidence for (Cypro-Minoan) literacy, but no one site can boast a complete "checklist" (see Knapp 1997: 54). These characteristics have a *spatial* and a *temporal* value. They require that we define not only their place in the landscape of an urban settlement, but also their place and duration in time. Urban-to-be settlements were founded in MC III/LC I on what seems to have been "virgin" soil (e.g., Enkomi, Palaepaphos) or were the outcome of regional nucleation processes (e.g., Kalavassos-*Ayios Demetrios*, Maroni-*Vournes*). In either case, the end results of their urban *floruit* are barely visible before LC IIC. The lack of stratigraphic-chronological depth leaves many questions unanswered: Was a particular urban characteristic in a particular site in place from the start (in MC III/LC IA), or did it develop later and in which phase of the Late Cypriot period? It is, therefore, not enough to agree that the Late Cypriot horizon saw the non-identical and non-simultaneous growth of a number of settlements into Cyprus's first towns. With the elision of its region-specific sequences, a Late Cypriot settlement's *historical* development in the course of *grosso modo* half a millennium (1700/1600–1200/1100 B.C.) can be easily compressed into a static and illusory picture made up of characteristics that do not have the same spatial and/or temporal value. This picture ignores the different stages of settlements' *transition to urbanism.*

Any attempt to reconstruct different stages requires us to concentrate on site structure at the individual level, even if one of the sad things we shall realize is how little real information we actually have. It is, for instance, ludicrous to pretend that we know the structure of Kition in LC IIC/IIIA, let alone earlier phases, when what we have of the urban structure of the town is its religious quarter and a section of its wall, plus a number of tombs. It is equally uncritical to pretend that we have the required minimum information for the structure of the town at Hala Sultan Tekke, when our knowledge is limited to an unknown percentage of its ultimate

LC IIIA settlement stratum. Why, then, are measures of site size attempted when site structure remains a less-than-adequately-known factor? Key facts are still missing. The picture of the different settlement types and patterns is weak, and little good has come out of measuring by subjective criteria the conjectural environment of Late Cypriot urban centers in square meters or hectares, and then comparing these figures. Local settlement *histories* and their variations (Keswani 2006: 211) will not be appreciated unless we drop the useless exercise of size estimates altogether and concentrate instead on site structure, which can reveal regional sequences in detail.

THE VASILIKOS AND THE MARONI VALLEYS: A WELL-ADVANCED RECORD OF SETTLEMENT HISTORIES

The one area where this methodological approach has been followed, leading to well-analyzed and widely appreciated results, is the Vasilikos Valley and its neighbor, the Maroni Valley. The Vasilikos Valley Project was launched in 1976. A quarter of a century of piecing together evidence from research and rescue operations (excavations and surveys) by Ian Todd and Alison South has resulted in a cohesive, phase by phase, spatial and temporal record of developments in the valley (Todd and South 1992; Todd 2004). Thus, in this region the transition to urbanism, as well as its climax, which finds its expression in the LC IIC town known by its locality name of *Ayios Demetrios*, is beginning to make adequate sense. A similar approach, only with a new suite of techniques, has been underway in the Maroni Valley since 1990, thanks to the collaboration of Gerald Cadogan, director of the Maroni-*Vournes* excavation, and Sturt Manning, director of the Maroni Valley Archaeological Survey Project (Manning et al. 1994). The results, which though preliminary are quite enlightening, have been outlined above (see also South 2002: 63 on "The Kalavassos and Maroni Areas").

What needs to be emphasized is that these are by nature open-ended projects—even if they were not intended as such from the start. When launched, each project sets up a method by which it begins to record spatial and temporal characteristics, which are the result of its own and previous field operations. This recording tool remains in use even after a project's official termination and can be continuously amended with new information from various kinds of interventions upon the landscape.

The Kouris River Valley in Crisis

Based on the Vasilikos and the Maroni valleys' successful records, it should not be too difficult to justify that the initiation of such an open-ended site recording project for the Kouris River valley is of the highest priority in view of the rapid loss of the valley's archaeo-environment to modern development (extensive housing projects and new communication arteries). Ever since the unexpected discovery of the urban center, and especially the magnificent ashlar buildings, at Alassa (Herscher 1996), a new parameter has been added in the study of the organization of the Late Cypriot economy per region. Contrary to what was until recently the prevailing view, an administrative center could develop as far as 10 km away from the coast, high up on the hills (at an altitude of 260 m) and very close to the copper mining areas (Ayios Mamas and Gerasa mines). This has far-reaching repercussions upon the geographical locus of the Kouris Valley primary "political" authority and requires that we should reevaluate the status and role of the contemporary coastal settlement at Kourion-*Bamboula*. Part of this settlement, which is located on a hill on the west bank of the river, was investigated by John Daniel in the 1930s. The tombs that had been found within the settlement were published many years later by J. L. Benson (1972) and the far from impressive architectural remains by Saul Weinberg (1983). In the absence of any other Late Cypriot settlement on that long stretch of the south coast, *Bamboula* has been elevated into the primary settlement of the Kouris region. Yet it should be noted that Knapp, who estimates its size at 6 ha, questions its primary hierarchical status (1997: 54). He also underlines that "its full areal extent is uncertain, and its coastal location remains the decisive factor in its categorization" (Knapp 1997: 62). In acknowledgment of the fact that *Bamboula* remains to this day a poorly known and inadequately recorded site, the University of Cincinnati has recently (2002) initiated a new project on the *Bamboula* hill under the direction of Professor Gisela Walberg (Hadjisavvas 2003: 661–62, fig. 41).

Not surprisingly, the first to suggest the need for a modified interpretation of the role of *Bamboula* was the excavator of Alassa: "the two settlements were part of a chain connecting the metal producing area of the lower hills of Troodos with the southern coast" (Hadjisavvas 1989: 40). The timely exploration of this chain on either side of the Kouris is becoming urgent, as new and peculiar site locations,

such as the Erimi-*Pytharka* Late Cypriot subterranean complexes (Vassiliou and Stylianou 2004), are revealed by salvage operations of the Department of Antiquities. A holistic (temporal and spatial) view of the *histories* of the Kouris River valley Bronze Age settlements will be made possible only after this highly dispersed information, the product of organized and rescue operations, has been collected, analyzed, and accurately plotted on a topographical map.

LATE CYPRIOT URBAN SETTLEMENT EQUALS LATE CYPRIOT STATE POLITY?

The primary targets of this article have been:

- to show the lack of comparability of measures of space, which hide the true nature of settlement structures;
- to raise some major issues regarding the nature, complexity, and diversity of Late Cypriot urban complexes, which indicate that it is premature to create simple categories, as local settlement topography is evidently varied and still inadequately studied;
- to insist that we analyze site structure not only spatially but also temporally, so that we can follow a Late Cypriot settlement's *history* from its establishment as an incipient urban settlement to the end of its functioning as an urban unit; and
- to suggest that we acknowledge the need to design region-specific, long-term, and open-ended research projects that will gradually elucidate the structure of Late Cypriot settlements.

Knowledge of the Late Cypriot urban structure is a sine qua non for the next step, the definition of Late Cypriot state centers. At the moment there seems to be no dividing line between an urban and a state center. The identification of urban features in two dozen Late Cypriot settlements does not mean that there was ever a moment when Late Bronze Age Cyprus was divided and governed from 20 or so contemporary autonomous polities. A set of urban features alone does not elevate a settlement into a state center.

"Subordinating discussion of urbanization to discussion of state formation never made good sense," writes Robin Osborne (2005: 2) and, although they are different agenda that he has in mind, I agree that the equivalent subordination has not proven beneficial for Cyprus in the Late Bronze Age. I too have claimed above, for reasons specific to Cyprus, that it is necessary to "liberate the study of the town" (Osborne 2005: 3) by concentrating on the individual settlement structures that represent the island's first urban centers. It will certainly help if we begin to think that we have to differentiate between (a) Late Cypriot settlements with urban characteristics and (b) urban settlements that have functioned as state centers for a specific length of time in the Late Bronze Age. If we can face up to the fact that (a) is not synonymous with (b), then we ought to be able to admit that, as regards (b), certainty is currently untenable.

Judging from the preurban socioeconomic structure of the Early and Middle Cypriot settlements (recently, Georgiou 2007), I continue to maintain that the appearance in the archaeological record (ca. mid-second millennium B.C.) of urban features or urban attitudes has to depend upon, and therefore cannot predate, the development of *at least one* local state authority (Iacovou 2005a: 27). This conjectural authority broke through the island's protracted isolation (as experienced by Early and Middle Cypriot agricultural communities) when it managed to establish long-distance trade with the Late Bronze Age Mediterranean states. Granted that Cypriot copper, and not an agricultural surplus, was the primary exchange product, this overseas trade meant the successful management at home of a heavy industry—hence, the maintenance of a specialized workforce and the redistribution of foodstuffs and also of imported exotica and other elite items. To this day, despite differences in interpretation, the preeminence of Enkomi—as regards the establishment of a state authority on the island that could manage this intricate network of operations—has not been successfully challenged by any other site (Peltenburg 1996: 36). Recently, in her still unpublished doctoral dissertation on "Social Complexity and Ceramic Technology on Late Bronze Age Cyprus: The New Evidence from Enkomi," Lindy Crewe (2004) isolates the intervening stages between the foundation of Enkomi as a coastal settlement in MC III/LC IA and its transition to urbanism. Crewe argues that Enkomi turned from gateway to central place after LC IB and that it consolidated its position in LC IIA. Her argument, almost entirely based on the pottery production industry, can be successfully defended because of the extent of Enkomi's horizontal and vertical exposures, something that is currently untenable for any other Late Cypriot site.

While nobody could deny that Enkomi achieved statehood *before* LC IIC—and in fact, Edgar Peltenburg has fixed it to MC III–LC I on the evidence of

"copper-working and an impressive level of organisation" (1996: 29)—the same cannot be claimed for any other Cypriot site on the basis of an equally meticulous, stratum by stratum, analysis of its spatial and temporal sequences prior to LC IIC. To this day, therefore, and despite the absence of a full suite of material correlates (an archive, instead of a few scattered Cypro-Minoan tablets, would have settled the matter), no other urban center on the island can accommodate any better the disproportionate material expectations that arise from the Alashiya textual (cuneiform) corpus (analyzed in Knapp 1996b). Not surprisingly, alternative views on the location of Alashiya in Cyprus, generated by the results of the petrographic investigation of Alashiyan tablets from El-Amarna and Ugarit (Goren et al. 2003), have been received with caution. Instead, many a leading scholar continues to see in Enkomi the island's archaic state, a Late Cypriot state that, for a period of time before the 13th century, exercised control over a *large part* of, or the *whole* island (cf. Muhly 1989; Peltenburg 1996; Webb 1999). My intention is not to reiterate the arguments in favor of or against this proposition, which have been analyzed extensively and dextrously by other scholars (summary and bibliography in Webb 1999: 305). Instead, in the last section of this paper, I attempt to explain how I have come to consider the latter option (control over the island's *whole* territory) unnecessary, and why we ought to stay focused on Enkomi's unchallenged chronological *precedence* in establishing a state authority; and, equally, on Enkomi-Salamis's unsurpassed millennium-long *continuity* as capital of a state that, to the end of the fourth century B.C., controlled a very *large part* of the island, despite periods of territorial recession. I should warn the reader that my argument will seem unorthodox. I approach the island's political development in the second and first millennia as a continuum that was not disrupted by the Bronze Age–Iron Age transition but only much later, at the very end of the fourth century B.C., by an exogenous authority.

FROM THE LC IIC PEER POLITIES TO THE CYPRO-CLASSICAL CITY-KINGDOMS

For the time being, Cyprus's political status before LC IIC remains a point of contention but, when we come to the 13th century, we reach a consensus. We agree that, by then, there were definitely a number of administrative centers, referred to in the literature as "peer polities," operating from urban settlements. Despite unanimity over the multiple peer-polity model for LC IIC, nobody seems to have found it possible to suggest how many, and which, Cypriot city-states were functioning simultaneously at that time. The fragmentation as well as the diverse nature of the evidence can well explain this caution but, if we admit that we cannot decide which sites were capitals in LC IIC, then it certainly becomes impossible to assess the effect of a number of key episodes. How can we gauge, for instance, the extent of the crisis on Cyprus at the end of the 13th century when we cannot calculate how many centers of authority had been abolished? The difficulty is compounded by the fact that we probably continue to think in terms of, and (subconsciously) search for, a static number of 13th-century state centers, each with its own consolidated territory, because we label the LC IIC period as the climax of urban development, which is often unwittingly interpreted as being equally the climax of state formation. This, however, is not a de facto equation. Alternative approaches do exist.

It is more likely that state formation was an ongoing process throughout the second half of the second millennium; it did not culminate in the 13th century but much later—after the crash of the second-millennium B.C. state economies, which put an end to the Late Bronze Age international period in the Mediterranean (cf. Liverani 1987; Ward and Joukowsky 1992). If the unidentified—by name and number—peer polities of LC IIC represent the first phase of an economic and political devolution that challenged the archaic state (of Alashiya), the better known—through inscriptions and literary *testimonia*—fourth-century Cypro-Classical polities represent the last. As I have argued a number of times in the past (and most recently, Iacovou 2007b), the transition from the Late Bronze Age to the Early Iron Age, on which we tend to place so much of the wrong kind of emphasis, did not cause a break in the political culture of Cyprus. The island's Iron Age state model was nothing new. It was an encore of what seems to have become established no later than LC IIC, and it remained staunchly and firmly in support of political segmentation. The one pertinent Iron Age novelty is that scholars use the term "city-kingdoms" (*poleis-basileia*) for the first-millennium B.C. polities because, from the seventh century B.C. onward, local epigraphical evidence in the Greek syllabic script of

Cyprus refers to the heads of these states as *basileis* (Iacovou 2006a). However, even in the fourth century B.C., the ultimate phase in their existence, the autonomous island authorities had not acquired a settled, static number (Iacovou 2002). When analyzed, the combined evidence (epigraphical, numismatic, literary, and only to a limited extent archaeological) indicates that their number kept fluctuating, along with the administrative capitals and the state boundaries, until 306 B.C., when the island's decentralized political system was terminated by Ptolemy I Soter in the name of consolidating his new empire (cf. Collombier 1993), and not because the prevalent Cypriot system had experienced an economic decline or had reached a political stalemate.

What we need to track down, therefore, are the main phases in an ongoing state formation process, which originated with a late second-millennium B.C. political devolution and was abolished by an exogenous intervention at the end of the fourth century, and also the *economic model* that gave ancient Cyprus's political system such a long and successful life.

The Early Phases

The number of Cypriot urban centers trying to become independent authorities began to increase sometime in the later 14th century (the post-Amarna period). Before the young and inexperienced 13th-century peer polities had consolidated their authority, the economic crisis, which did not leave Cyprus unaffected, led to a series of settlement abandonments, with some destructions of central buildings. As a result, extensive territories—Kalavassos-*Ayios Demetrios* and the Vasilikos Valley, Maroni-*Vournes* and the Maroni Valley, Alassa-*Paliotaverna* and the Limnatis region of the Kouris River—were never again to have an urban, let alone political, center grow anywhere near the abandoned ruins of their LC IIC central buildings. Thus, the first attempt at political devolution came to an abrupt end with these unsettling events. New claimants were now to avail themselves of these territories, and this new episode would lead to a second phase in the state formation process.

The profile of the 12th century is scarred by the dramatic decrease in the number of Late Cypriot urban centers, but state formation as a process did not stall in LC IIIA. In fact, the transition from LC IIC to LC IIIA carries dynamic archaeological evidence as regards two "new" polities. Palaepaphos and Kition turned from gateways to veritable central places at the end of LC IIC—that is, while many other urban settlements were closing down. Shortly before the transition to the 12th century, Palaepaphos and Kition had evidently managed to concentrate so much strength in terms of territories and populations (as a result of successive settlement closures) that they could afford to give a monumental expression to their newly acquired political status. They directed human and material resources of an unprecedented scale toward a hitherto unprecedented enterprise: the construction of multiple ashlar units of a sacred character in the *temene* of Palaepaphos and Kition. "Because they require the ability to mobilize large quantities of labor and materials, monuments typically make tangible and visible major communal efforts or the ideological statements of dominant groups" (Pollock 1999: 175).

Palaepaphos and Kition shared real and substantial similarities, which have little to do with urban size. They developed into state centers simultaneously; each expressed its capital status with the adoption and execution of a grand building project that conformed to one model. In an island where an identifiable secular administration (palace) model did not exist and special-purpose ritual structures are absent before LC II (Webb 1999: 284), the sacred environment was suddenly given a monumental architectural imprint on a megalithic scale. During the transition from LC IIIA to LC IIIB, when Hala Sultan Tekke was finally abandoned and Enkomi was being transferred to Salamis—from where it continued to be in control of much of the eastern part of the island—Palaepaphos and Kition did not shift one inch away from their imposing sacred landmarks. For long into the first millennium, the massive temenos walls enclosed sanctuaries that were directly associated with the royal dynasties (one Greek, one Phoenician) of the Iron Age kingdoms of Palaepaphos and Kition (Iacovou 2006b: 45, 49).

THE ECONOMIC MODEL AND THE POLITICAL GEOGRAPHY OF CYPRUS IN THE SECOND AND FIRST MILLENNIA B.C.

I have for long insisted that we ought to approach the Iron Age with the methodologies and theoretical models that have widened our understanding of the

Cypriot Bronze Age (Iacovou 2005b: 125). Now, for the first time, I propose that we reverse direction and take stock of some basic observations and patterns that can be retrieved from the study of the island's Iron Age polities in an effort to set up the principles by which we could approach the economic model that shaped the political geography of the Late Cypriot polities.

Observations

During the first millennium, the various kingdom capitals did not all become political centers at the same time; nor did they manage to remain state centers for the same length of time. Salamis and Paphos were successful kingdoms to the end, but any such claim on behalf of Ledra or Chytroi finds no support of any kind after the first half of the seventh century, when they are included in a list of ten kingdoms of Cyprus by Esarhaddon and again by Ashurbanipal (cf. Saporetti 1976; Reyes 1994: 58–59, 160). In fact, none of the inland kingdoms identified on the two identical royal Neo-Assyrian inscriptions—Idalion, Chytroi, Tamassos, and Ledra, which were closer to the mines but farther from the sea—was able to maintain an autonomous status (Iacovou 2002: 77, 81).

Patterns

A thorough analysis of what at first glance may seem like an incomprehensibly frequent fluctuation of the number and location of the Iron Age states, as attested in the combined epigraphical and (often enigmatic and certainly problematic) literary evidence (Iacovou 2004: 279–80), can in fact produce a viable pattern, especially when set against the map of the island. In "From Ten to Naught" (Iacovou 2002), I proposed a scheme that allows us to see in this pattern the *formation*, *consolidation* and *abolition* of Cyprus's Iron Age polities. Neither the first (the formative) nor the second stage required that the island be put under a central authority. The *economic model* that gave substance and wealth to a (diminishing) number of states for a greater or lesser period of time before the abolition of Cypriot kingship at the end of the fourth century *did not* require control of the entire island by any one of them. Nonetheless, it appears to have been dependent on a minimum requirement: control over a geographically unified territory that had (a) copper sources, (b) agricultural wealth, and (c) access to a port of export. Consequently, the nonvariable coordinates that will guide us in charting the course of the ancient states of Cyprus in the second and first millennia B.C. are the island's geography and geology. Specifically,

- A Cypriot mining station on its own could not become a polity no matter how many tons of copper it could produce.
- A Cypriot harbor installation on its own was nothing but a fishing hamlet unless the island's mineral wealth found its way to its docks and was exported with the stamp of a recognized authority.
- Mining stations and harbor installations could not have survived as special function areas unless a third party had undertaken the systematic collection and distribution of foodstuffs to the labor forces applying mining and seafaring expertise. Farmers received, in exchange for their labor and surplus production, their share of imported status objects and exotica and, in fact, emulated urban behaviors; but a farming community on its own could not function as a polity.
- Only the triad could produce a Cypriot state (take one away and the state falters) and, in each set of three, only one could function as the triad's administrative capital.
- The capital center did not have to be located on the cupriferous foothills of the Troodos, but it had to be in command of a copper mining area; it did not have to be by the coast, but it had to be in command of a harbor; it did not have to be in the center of the Mesaoria Plain, but it had to be in command of a rich agricultural region.

This, in my opinion, is the magic recipe, and although at first glance it is bound to sound similar to Catling's tripartite site organization of Bronze Age Cyprus (1962), this model has been extracted from the study of the Iron Age polities, whose last kings defended the tradition of political segmentation literally to their death. The endurance of the economic model suggests that placing the entire island under a unified control was not necessarily a prerequisite for Enkomi's or any other urban center's rise to statehood. Even as an archaic state, Enkomi did not have to be in control of the whole island at any time in order to become acknowledged as Alashiya by its international trading partners. The prerequisite was the firm establishment of its authority over a geographically unified territory whose western boundaries would reach out beyond the fertile Mesaoria Plain and incorporate a cupriferous section of the Troodos foothills.

Enkomi had been founded to serve as a harbor and, left on its own, was only the nearest such installation to Ugarit and the Syro-Palestinian coast. However, as Peltenburg has aptly pointed out (1996: 31), Enkomi lay the farthest away from the closest copper-producing area in Cyprus. For Enkomi to meet the minimum requirement that transformed it into Cyprus's first discernible central authority meant placing under its control a very large part of the island—in effect, the eastern half. Enkomi-Salamis's unsurpassed millennium-long preeminence as the capital of one of the largest and wealthiest (to judge from the Late Cypriot burials and later the Cypro-Archaic "royal" tombs alone) ancient polities of Cyprus was not an easy achievement. It required constant investment in protecting its mining region in particular, which was in the heart of the island, where the mining interests of the political devolution champions met, and distant from its administrative center on the east coast. For Ledra and Chytroi to have become independent kingdoms for any length of time must have meant that the borders of Salamis had been curtailed and its mining region seriously diminished. There is also epigraphical and literary evidence that, put together, would suggest that as late as the fourth century B.C., the metalliferous region of Tamassos changed hands between the kings of Salamis and Kition (analyzed in Iacovou 2002: 79). On this analogy, for Kition to have become a powerful autonomous authority in LC IIC–IIIA for the first time, Enkomi must have suffered territorial recession. Should we interpret the Pyla-*Kokkinokremos* episode as evidence of their confrontation? In effect, Enkomi-Salamis waged a ceaseless struggle against political devolution from the 13th century B.C.

INSTEAD OF AN EPILOGUE

When Keswani states that "[p]eriods of segmentation and competition may have alternated with periods of hierarchical integration, with centralization being achieved at best tenuously for short periods of time" (1996: 238–39), she is describing the Late Cypriot period; but I think that the passage is equally apt for describing the "ebb and flow" of the island's Iron Age polities. The fluid political geography of both horizons was determined by the same nonvariable coordinates and the same economic model. I am confident that, eventually, the rise and fall of all the ancient Cypriot polities will come to fit an identifiable pattern.

ACKNOWLEDGMENTS

Early attempts to formulate this argument were presented, first, at the Institute of Archaeology, London, following the kind invitation of Dr. Alan Johnston, in a symposium on the work of University College London alumni in the History and Archaeology of the Ancient Mediterranean (2004); second, at the Institute of Archaeology, Oxford, where upon invitation by Professor Barry Cunliffe, I had the privilege of holding a British Academy Visiting Professorship (2004). A penultimate version of this paper was delivered at the Cyprus American Archaeological Research Institute in Nicosia (2005) at the invitation of its director, Dr. Tom Davis. I wish to thank Jennifer Webb, David Frankel, Gerald Cadogan, and Ellen Herscher for the patience with which they have read and commented on this version. I gratefully acknowledge the fact that they have made me rethink many points. The reader should also appreciate that they have done their best (and, as regards Gerald Cadogan, not for the first time) to protect the English language from my Greek pleonastic style. I must also thank the reviewers for their generous evaluations. I have given serious consideration to their suggestions and have responded to (almost) all of them. I remain solely responsible for the interpretation put forward in this article and for any mistakes that may have been left in the text.

REFERENCES

Åström, P.
1985 Hala Sultan Tekke. Pp. 173–81 in *Archaeology in Cyprus 1960–1985*, ed. V. Karageorghis. Nicosia: Leventis Foundation.
1986 Hala Sultan Tekke: An International Harbour Town of the Late Cypriote Bronze Age. *Opuscula Atheniensia* 16: 7–17.
1989 *Hala Sultan Tekke*, Vol. 9: *Trenches 1972–1987*. Studies in Mediterranean Archaeology 45:9. Göteborg: Åström.
1996 Hala Sultan Tekke—A Late Cypriote Harbour Town. Pp. 9–14 *in Late Bronze Age Settlement in Cyprus: Function and Relationship*, eds. P. Åström and E. Herscher. Studies in

Mediterranean Archaeology and Literature Pocket-Book 126. Jonsered: Åström.

Åström, P.; Bailey, D. M.; and Karageorghis, V.
1976 *Hala Sultan Tekke*, Vol. 1: *Excavations 1897–1971*. Studies in Mediterranean Archaeology 45:1. Göteborg: Åström.

Bell, C.
2006 *The Evolution of Long Distance Trading Relationships across the LBA/Iron Age Transition on the Northern Levantine Coast: Crisis, Continuity and Change*. BAR International Series 1574. Oxford: Archaeopress.

Benson, J. L.
1972 *Bamboula at Kourion: The Necropolis and the Finds*. University Museum Monograph 12. Philadelphia: University of Pennsylvania.

Bunimovitz, S.
1998 Sea Peoples in Cyprus and Israel: A Comparative Study of Immigration Processes. Pp. 103–13 in *Mediterranean Peoples in Transition: Thirteenth to Early Tenth Centuries BCE: In Honor of Professor Trude Dothan,* eds. S. Gitin, A. Mazar, and E. Stern. Jerusalem: Israel Exploration Society.

Cadogan, G.
1996 Maroni: Change in Late Bronze Age Cyprus. Pp. 15–22 in *Late Bronze Age Settlement in Cyprus: Function and Relationship,* eds. P. Åström and E. Herscher. Studies in Mediterranean Archaeology and Literature Pocket-Book 126. Jonsered: Åström.

Catling, H. W.
1962 Patterns of Settlement in Bronze Age Cyprus. *Opuscula Atheniensia* 4: 129–69.
1968 Kouklia: *Evreti* Tomb 8. *Bulletin de Correspondance Hellénique* 92: 162–69.
1979 The St. Andrews-Liverpool Museums Kouklia Tomb Excavation 1950–1954. *Report of the Department of Antiquities, Cyprus*: 270–75.

Collombier, A.-M.
1993 La fin des royaumes chypriotes: Ruptures et continuités. *Transeuphratène* 6: 119–47.

Crewe, L.
2004 Social Complexity and Ceramic Technology on Late Bronze Age Cyprus: The New Evidence from Enkomi. Ph.D. dissertation, University of Edinburgh.

Diacopoulos, L.
2004 Investigating Social Complexity through Regional Survey: "Second-Generation" Analysis of Bronze Age Data from the Canadian Palaipaphos Survey Project, Southwestern Cyprus. *Journal of Mediterranean Archaeology* 17: 59–85.

Dikaios, P.
1969–1971 *Enkomi. Excavations 1948–1958*, Vols. 1, 2, 3a, 3b. Mainz am Rhein: von Zabern.

Furumark, A.
1965 The Excavations at Sinda. Some Historical Results. *Opuscula Atheniensia* 6: 99–116.

Furumark, A., and Adelman, C. M.
2003 *Swedish Excavations at Sinda, Cyprus: Excavations Conducted by Arne Furumark 1947–1948*. Acta Instituti Atheniensisi regni sueciae 4, 50. Stockholm: Åström.

Georghiou, G.
2007 Η Τοπογραφία της Ανθρώπινης Εγκατάστασης στην Κύπρο κατά την Πρώιμη και Μέση Χαλκοκρατία [Settlement Distribution in Cyprus in the Early and Middle Bronze Age]. Ph.D. dissertation, University of Cyprus.

Gifford, J. A.
1980 *Paleogeography of Archaeological Sites of the Larnaca Lowlands, Southeastern Cyprus.* Ph.D. dissertation, University of Minnesota. Ann Arbor: University Microfilms International.

Goren, Y.; Bunimovitz, S.; Finkelstein, I.; and Na'aman, N.
2003 The Location of Alashiya: New Evidence from Petrographic Investigation of Alashiyan Tablets from El-Amarna and Ugarit. *American Journal of Archaeology* 107: 233–55.

Hadjisavvas, S.
1989 A Late Cypriot Community at Alassa. Pp. 32–42 in *Early Society in Cyprus,* ed. E. Peltenburg. Edinburgh: Edinburgh University.
1996 Alassa: A Regional Centre of Alasia? Pp. 23–38 in *Late Bronze Age Settlement in Cyprus: Function and Relationship,* eds. P. Åström and E. Herscher. Studies in Mediterranean Archaeology and Literature Pocket-Book 126. Jonsered: Åström.
2003 Chronique des fouilles et découvertes archéologiques à Chypre en 2002. *Bulletin de Correspondance Hellénique* 127: 649–82.

Herscher, E.
1996 Introduction. Pp. 6–8 in *Late Bronze Age Settlement in Cyprus: Function and Relationship,* eds. P. Åström and E. Herscher. Studies in Mediterranean Archaeology and Literature, Pocket-Book 126. Jonsered: Åström.

Iacovou, M.
2002 From Ten to Naught: Formation, Consolidation and Abolition of Cyprus' Iron Age Polities. *Cahier du Centre d'Études Chypriotes* 32: 73–87.
2004 Mapping the Ancient Kingdoms of Cyprus: Cartography and Classical Scholarship during the Enlightenment. Pp. 263–85 in *Eastern Mediterranean Cartographies*, eds. G. Tolias and D. Loupis. Tetradia Ergasias 25–26. Athens: Institute for Neohellenic Research, National Hellenic Research Foundation.

2005a The Early Iron Age Urban Forms of Cyprus. Pp. 17–43 in *Mediterranean Urbanisation 800–600 BC*, eds. B. Cunliffe and R. Osborne. Proceedings of the British Academy 126. London: Oxford University.

2005b Cyprus at the Dawn of the First Millennium BC: Cultural Homogenization Versus the Tyranny of Ethnic Identifications. Pp. 125–34 in *Archaeological Perspectives on the Transmission and Transformation of Culture in the Eastern Mediterranean,* ed. J. Clarke. Levant Supplementary Series 2. Oxford: Oxbow.

2006a The *Basileus* in the Kingdoms of Cyprus. Pp. 315–35 in *Ancient Greece from the Mycenaean Palaces to the Age of Homer*, eds. S. Deger-Jalkotzy and I. S. Lemos. Edinburgh Leventis Studies 3. Edinburgh: University of Edinburgh.

2006b "Greeks," "Phoenicians" and "Eteocypriots": Ethnic Identities in the Cypriote Kingdoms. Pp. 27–59 in *Sweet Land . . .: Cyprus through the Ages*, eds. J. Chrysostomides and Ch. Dendrinos. Camberley, Surrey: Porphyrogenitus.

2007a Aegean-Style Material Culture in Late Cypriote III. Minimal Evidence, Maximal Interpretation. In *Philistines and Other "Sea Peoples": Aegean-Style Material Culture in the Eastern Mediterranean during the 12th Century BCE.*, eds. A. Killebrew, G. Lehmann, and M. Artzy. Atlanta: Society of Biblical Literature.

2007b Advocating Cyprocentricism. An Indigenous Model for the Emergence of State Formations on the Mediterranean's Easternmost Island. In *Up to the Gates of Ekron (I Samuel 17:52): Essays on the Archaeology and History of the Eastern Mediterranean in Honor of Seymour Gitin*, eds. S. W. Crawford, A. Ben-Tor, J. P. Dessel, W. G. Dever, A. Mazar, and J. Aviram. Jerusalem: Israel Exploration Society.

Iacovou, M., ed.

2004 *Archaeological Field Survey in Cyprus: Past History, Future Potentials: Proceedings of a Conference Held by the Archaeological Research Unit of the University of Cyprus, 1–2 December, 2002*. British School at Athens Studies 11. London: British School at Athens.

Karageorghis, J.

2005 *Kypris: The Aphrodite of Cyprus. Ancient Sources and Archaeological Evidence*. Nicosia: Leventis Foundation.

Karageorghis, V.

1969 *Salamis: Recent Discoveries in Cyprus*. London: Thames and Hudson.

1990a *The End of the Late Bronze Age in Cyprus*. Nicosia: Pierides Foundation.

1990b *Tombs at Palaepaphos*, 1: *Teratsoudhia*, 2: *Eliomylia*. Nicosia: Leventis Foundation.

2001 Patterns of Fortified Settlements in the Aegean and Cyprus c. 1200 B.C. Pp. 1–12 in *Defensive Settlements of the Aegean and the Eastern Mediterranean after c. 1200 B.C.: Proceedings of an International Workshop Held at Trinity College, Dublin, 7th–9th May, 1999*, eds. V. Karageorghis and C. Morris. Nicosia: Trinity College Dublin.

Karageorghis, V., and Demas, M.

1984 *Pyla-Kokkinokremos. A Late 13th-Century B.C. Fortified Settlement in Cyprus*. Nicosia: Department of Antiquities, Cyprus.

1985 *Excavations at Kition*, Vol. 5: *The Pre-Phoenician Levels. Areas I and II*, Part 1. Nicosia: Department of Antiquities, Cyprus.

1988 *Excavations at Maa-Palaeokastro, 1979–1986*. 3 vols. Nicosia: Department of Antiquities, Cyprus.

Keswani, P. S.

1993 Models of Local Exchange in Late Bronze Age Cyprus. *Bulletin of the American Schools of Oriental Research* 292: 73–83.

1996 Hierarchies, Heterarchies and Urbanization Processes: The View from Bronze Age Cyprus. *Journal of Mediterranean Archaeology* 9: 211–50.

2004 *Mortuary Ritual and Society in Bronze Age Cyprus*. London: Equinox.

Knapp, A. B.

1994 The Prehistory of Cyprus: Problems and Prospects. *Journal of World Prehistory* 8: 377–453.

1996a Settlement and Society on Late Bronze Age Cyprus: Dynamics and Development. Pp. 54–80 in *Late Bronze Age Settlement in Cyprus: Function and Relationship,* eds. P. Åström and E. Herscher. Studies in Mediterranean Archaeology and Literature Pocket-Book 126. Jonsered: Åström.

1996b *Near Eastern and Aegean Texts from the Third to the First Millennia BC*. Sources for the History of Cyprus 2. Altamont, NY: Greece and Cyprus Research Center.

1997 *The Archaeology of Late Bronze Age Cypriot Society: The Study of Settlement, Survey and Landscape*. Occasional Paper 4. Glasgow: Department of Archaeology, University of Glasgow.

Knapp, A. B., and Antoniadou, S.

1998 Archaeology, Politics and the Cultural Heritage of Cyprus. Pp. 13–43 in *Archaeology under Fire: Nationalism, Politics and Heritage in the Eastern Mediterranean and Middle East*, ed. L. Meskell. New York: Routledge.

Liverani, M.

1987 The Collapse of the Near Eastern Regional System at the End of the Bronze Age: The Case

of Syria. Pp. 66–73 in *Centre and Periphery in the Ancient World*, eds. M. Rowlands, M. T. Larsen, and K. Kristiansen. Cambridge: Cambridge University.

Maier, F. G.
1985 *Alt-Paphos auf Cypern: Ausgrabungen zur Geschichte von Stadt und Heiligtum 1966–1984*. Trierer Winckelmannsprogramme 6. Mainz am Rhein: von Zabern.

Maier, F. G., and Karageorghis, V.
1984 *Paphos, History and Archaeology*. Nicosia: Leventis Foundation.

Maier, F. G., and Wartburg, M.-L. von
1985 Reconstructing History from the Earth, *c.* 2800 B.C.–1600 A.D.: Archaeology at Palaepaphos, 1966–1984. Pp. 142–72 in *Archaeology in Cyprus 1960–1985*, ed. V. Karageorghis. Nicosia: Leventis Foundation.

Manning, S. W.
1998 *Tsaroukkas*, Mycenaeans and Trade Project: Preliminary Report on the 1996–1997 Seasons. *Report of the Department of Antiquities, Cyprus*: 39–54.

Manning, S. W.; Bolger, D. L.; Swinton, A.; and Pointing, M. J.
1994 Maroni Valley Archaeological Survey Project: Preliminary Report on 1992–1993 Seasons. *Report of the Department of Antiquities, Cyprus*: 345–67.

Manning, S. W., and de Mita, F. A., Jr.
1997 Cyprus, the Aegean, and Maroni-*Tsaroukkas*. Pp. 103–42 in *Proceedings of an International Archaeological Conference: Cyprus and the Aegean in Antiquity*, ed. D. Christou. Nicosia: Department of Antiquities, Cyprus.

Manning, S. W., and Monks, S. J.
1998 Late Cypriot Tombs at Maroni *Tsarroukkas*, Cyprus. *Annual of the British School at Athens* 93: 297–351.

Merrillees, R. S.
1992 The Government of Cyprus in the Late Bronze Age. Pp. 310–28 in *Acta Cypria: Acts of an International Congress on Cypriote Archaeology Held in Göteborg on 22–24 August, 1991*, Part 3, ed. P. Åström. Studies in Mediterranean Archaeology and Literature Pocket-Book 120. Jonsered: Åström.

Muhly, J.
1989 The Organisation of the Copper Industry in Late Bronze Age Cyprus. Pp. 298–314 in *Early Society in Cyprus*, ed. E. Peltenburg. Edinburgh: University of Edinburgh.

Negbi, O.
1986 The Climax of Urban Development in Bronze Age Cyprus. *Report of the Department of Antiquities, Cyprus:* 97–121.

2005 Urbanism on Late Bronze Age Cyprus: LC II in Retrospect. *Bulletin of the American Schools of Oriental Research* 337: 1–45.

Nicolaou, K.
1976 *The Historical Topography of Kition*. Studies in Mediterranean Archaeology 43. Göteborg: Åström.

Osborne, R.
2005 Urban Sprawl: What is Urbanization and Why Does It Matter? Pp. 1–16 in *Mediterranean Urbanization 800–600 BC*, eds. B. Cunliffe and R. Osborne. Proceedings of the British Academy 126. London: Oxford University.

Peltenburg, E.
1996 From Isolation to State Formation in Cyprus, c. 3500–1500 BC. Pp. 17–43 in *The Development of the Cypriot Economy from the Prehistoric Period to the Present Day*, eds. V. Karageorghis and D. Michaelides. Nicosia: University of Cyprus.

Pollock, S.
1999 *Ancient Mesopotamia: The Eden That Never Was*. Cambridge: Cambridge University.

Reyes, A. T.
1994 *Archaic Cyprus: A Study of the Textual and Archaeological Evidence*. Oxford: Clarendon.

Saporetti, C.
1976 Cipro nei testi neoassiri. Pp. 83–88 in *Studi Ciprioti e Raporti di Scavo*, Fasc. 2. Biblioteca di Antichità Cipriote 3. Rome: Istituto per gli Studi Micenei ed Egeo-Anatolici.

Sarris, A.; Stamatis, G.; Papadopoulos, N.; Kokkinou, E.; Topouzi, S.; Kokkinaki, E.; Moissi, E.; Iacovou, M.; Kassianidou; V., Papassavas, G.; Papantoniou, G.; Dikomitou, M.; and Stylianidis, St.
2006 Palaepaphos, Cyprus: The Contribution of Geographical Information Systems and Geophysical Prospection in the Study of the Archaeological Topography and Settlement Patterns. Pp. 199–204 in *The World Is in Your Eyes—CAA 2005—Computer Applications and Quantitative Methods in Archaeology. Proceedings of the 33rd Conference, Tomar, March 2005*, eds. A. Figueiredo and G. Velho. Tomar: CAAPortugal.

Smith, J. S.
1994 Seals for Sealing in the Late Cypriot Period. Ph.D. dissertation, Bryn Mawr College.

South, A. K.
1989 From Copper to Kingship. Pp. 315–24 in *Early Society in Cyprus*, ed. E. Peltenburg. Edinburgh: Edinburgh University.
1996 Kalavasos-Ayios Dhimitrios and the Organisation of Late Bronze Age Cyprus. Pp. 39–49 in *Late Bronze Age Settlement in Cyprus: Function and Relationship*, eds. P. Åström and

E. Herscher. Studies in Mediterranean Archaeology and Literature Pocket-Book 126. Jonsered: Åström.

2002 Late Bronze Age Settlement Patterns in Southern Cyprus: The First Kingdoms? *Cahier du Centre d'Études Chypriotes* 32: 59–72.

Stamatis, G.

2005 Παλαίπαφος Κύπρου: Η Συμβολή των Γεωγραφικών Συστημάτων Πληροφοριών και των Γεωψυσικών Διασκοπήσεων στη Διερεύνηση της Αρχαιολογικής Τοπογραφίσς και Οικιστικής Οργάνωσης της Περιοχής. M.A. thesis, University of Crete.

Swiny, S.

1981 Bronze Age Settlement Patterns in Southwest Cyprus. *Levant* 13: 51–87.

Todd, I. A.

2004 Field Survey in the Vasilikos Valley. Pp. 43–54 in *Archaeological Field Survey in Cyprus: Past History, Future Potentials: Proceedings of a Conference Held by the Archaeological Research Unit of the University of Cyprus, 1–2 December, 2000*, ed. M. Iacovou. British School at Athens Studies 11. London: British School at Athens.

Todd, I. A., and South, A. K.

1992 The Late Bronze Age in the Vasilikos Valley: Recent Research. Pp. 191–204 in *Studies in Honour of Vassos Karageorghis,* ed. G. C. Ioannides. Nicosia: Society of Cypriot Studies.

Vassiliou, E., and Stylianou, E.

2004 Dropping in on Late Bronze Age Erimî: Erimi-*Pitharka*, Preliminary Excavation Report. *Report of the Department of Antiquities, Cyprus*: 181–200.

Vermeule, E. D. T., and Wolsky, F. Z.

1990 *Toumba tou Skourou: A Bronze Age Potters' Quarter on Morphou Bay in Cyprus.* Cambridge, MA: Harvard University.

Ward, W. A., and Joukowsky, M. S., eds.

1992 *The Crisis Years: The 12th Century B.C. from beyond the Danube to the Tigris.* Dubuque, IA: Kendall/Hunt.

Webb, J. M.

1999 *Ritual Architecture: Iconography and Practice in the Late Cypriot Bronze Age.* Studies in Mediterranean Archaeology and Literature Pocket-Book 75. Jonsered: Åström.

Weinberg, S. S.

1983 *Bamboula at Kourion: The Architecture.* University Museum Monograph 42. Philadelphia: University Museum, University of Pennsylvania.

Yon, M.

1980 La fondation de Salamine. Pp. 71–80 in *Salamine de Chypre: Histoire et archéologie*, ed. M. Yon. Colloques Internationaux du Centre National de la Recherche Scientifique 578. Paris: Éditions du CNRS.

2006 *Kition de Chypre.* Guides archéologiques de l'Institut Français du Proche-Orient 4. Paris: Éditions Recherche sur les Civilisations.