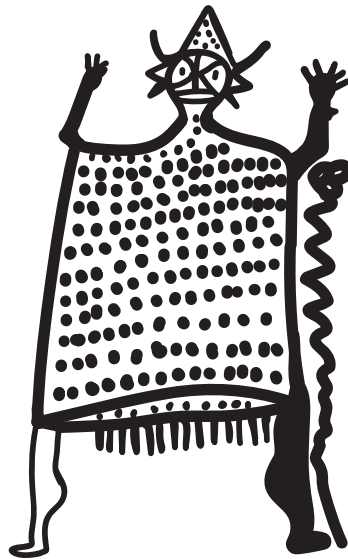


STUDIES IN MEDITERRANEAN ARCHAEOLOGY
VOL. CLIV

THE DECLINE OF BRONZE AGE CIVILISATIONS IN THE MEDITERRANEAN: CYPRUS AND BEYOND

edited by

Teresa Bürge and Peter M. Fischer



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Cover image: 'Horned God' on krater N121 from Hala Sultan Tekke, CQ2, Stratum 2
(LC IIIA early; ca 1200 BC) (drawing by T. Bürge)

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Preface and acknowledgements

The papers presented in this volume are the results of the conference *The Decline of Bronze Age Civilisations in the Mediterranean: Cyprus and Beyond* organised by the editors of the volume and held on January 17 and 18, 2020 at the Department of Historical Studies, University of Gothenburg. It was supported by much appreciated funds from the Swedish Research Council (Vetenskapsrådet, registration number 2019-00327) and the Riksbank's Anniverary Fund (Riksbankens Jubileumsfond, registration number F19-1036:1). In addition, it was the final conference of the project *The Collapse of Bronze Age Societies in the Eastern Mediterranean* (Vetenskapsrådet, registration number 2015-01192; project director Peter M. Fischer) that investigated the causes of disruption in international trade and the 'collapse' of Bronze Age civilisations in the Eastern Mediterranean in the second half of the 13th and the 12th centuries BC, focusing on the island of Cyprus which was the centre of interregional trade in this region. The project was closely connected with our ongoing excavations at the Late Bronze Age harbour city of Hala Sultan Tekke on the island's southern coast.

The newly restored and enlarged building of the Faculty of Humanities, where the conference was hosted, thanks to the support of Henrik Jansson, the Head of the Department, provided an excellent environment for the conference. The conference dinner in the refined Jugendstil milieu of 'Ågrenska Villan', built in 1916 in the centre of Gothenburg as a private residence and since 1981 owned by the University of Gothenburg, was much appreciated by the participants. To the best of our knowledge, this conference was the last at the university of

Gothenburg before the serious outbreak of COVID-19 ended physical meetings for almost two years. In retrospect, we are even more grateful that we could enjoy these very intense and stimulating two days to the full, untroubled by thoughts about physical distancing, the potential spread of infection and other issues that would start to affect our everyday life only a few weeks later.

For some of us the pandemic was a very quiet and perhaps more productive period than usual, while others had to deal with parental challenges while schools and preschools were closed. In spite of these and the many other difficulties, issues and changes that we all had to face during the last more than two and a half years, we are particularly glad that all participants were able to submit a contribution to the present volume. In addition, we have included three more chapters to round off the topic.

Besides the funding bodies mentioned above, we would like to thank Jennifer Webb and David Frankel and Lennart Åström, the editors-in-chief and manager of SIMA, for including the volume in this series. Each single contribution was carefully peer-reviewed and we are grateful to all reviewers for accepting this task. Jennifer Webb has given us incredible support by finalising the layout and correcting and improving the language. We are very much obliged for all her accurate work! We also want to thank Elena Peri, who has assisted with copy editing, and Jennie Fälth of the administration of our department for practical help.

Gothenburg and Bern, June 2023
Teresa Bürge and Peter M. Fischer

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Prelude to crisis? A closer look at Pyla Kokkinokremos

Jan Driessen, Joachim Bretschneider and Athanasia Kanta

Abstract

Since its discovery in the early 1950s, the Late Bronze Age settlement of Pyla Kokkinokremos has been occupying a prominent position in the debates surrounding the ‘collapse’ of Bronze Age Mediterranean societies ca 1200 BC and this for several reasons. The short-lived character of the site—founded towards the end of the 13th century BC and abandoned during the first quarter of the 12th century BC—, its exceptional ‘casemate’ architecture, and the multi-ethnic character of its material culture—with references to Sardinia, Crete, Egypt, Anatolia, the Syro-Palestinian coast and Mycenaean Greece—all make the site stand out and have contributed to assign it a particular status in the Late Cypriot IIC–IIIA settlement landscape and within the discussions of the ‘Sea Peoples’. Following earlier investigations by Porphyrios Dikaïos, Vassos Karageorghis and Athanasia Kanta, a new joint excavation program was inaugurated in 2014. Five years of excavation both in the centre and around the upper contours of the hill now allow a better contextualisation and a reconsideration of earlier discoveries. In this paper, we especially pay attention to half a dozen special depositional contexts of valuable objects and metals that were constituted immediately prior to the abandonment of the site. We interpret these contexts as emergency hoards, direct announcements of difficult times to come. We discuss some of the hypotheses that could explain the presence of these hoards.

Introduction

While there is a broad consensus that palace centres and economies in Greece, Anatolia and the Levant suffered greatly in the period known as the ‘crisis years’, the time span between the late 13th century to early 12th century BC (Table 1), there is little consensus on the cause, duration and effect of these destructions and changes, despite a multitude of studies (e.g. Cline 2014; Knapp & Manning 2016; papers in Driessen 2018). In the urban centres of Cyprus, destruction and

abandonment horizons characterise the LC IIC–IIIA transition (Jung 2010; Georgiou 2012; Iacovou 2013; Fischer & Bürge 2018: 603–608, table 10.2). For the southeast of the island, there are well-documented fire devastations in Enkomi (Stratum IIB) and at Hala Sultan Tekke (Strata 2 and 1) while no large-scale destruction has yet been detected in the excavated areas of Kition, which judging from its size may have been the political centre of the region (Georgiou 2015: 138). Despite the limited explorations, the structural changes in the temple district, between Floor IV (LC IIC) and Floors IIIA & III, are striking, suggestive of drastic cultural changes (Karageorghis & Demas 1985: 272, fig. 1). The resumption of archaeological work on the Pyla Kokkinokremos plateau in 2014 was explicitly motivated by the intention to elucidate the modalities of the Late Bronze Age crisis years. Five excavation campaigns have produced new evidence that allows revisiting some of the historical problems we face while studying the period (Karageorghis 2011; Jung 2018a, 2018b).

Pyla Kokkinokremos

Pyla Kokkinokremos is the name of a rocky plateau 75–83m high, located about 800m from the present southeast coastline of Cyprus within the British sovereign base of Dhekeleia (Figs 1–2). The site was explored on three previous occasions: first by Porphyrios Dikaïos in 1952 (Dikaïos 1971), then by Vassos Karageorghis in 1981 and 1982 (Karageorghis & Demas 1984) and then, more recently, by Vassos Karageorghis and Athanasia Kanta (2010–2011), and Kanta (2014) (Karageorghis & Kanta 2014). Since 2003, its proximate region has also formed the focus of an intensive, systematic surface survey and geomorphological exploration that focused on the Roman and Late Antiquity occupation (Zomeni 2014; Caraher *et al.* 2015). During this work, some minor explorations also took place on the Pyla Kokkinokremos plateau itself (Brown 2012, 2013, 2017).

Intensive systematic excavations between 2014 and 2019 now suggest that the entire plateau, which covers an area of 6ha, and even parts of the southern

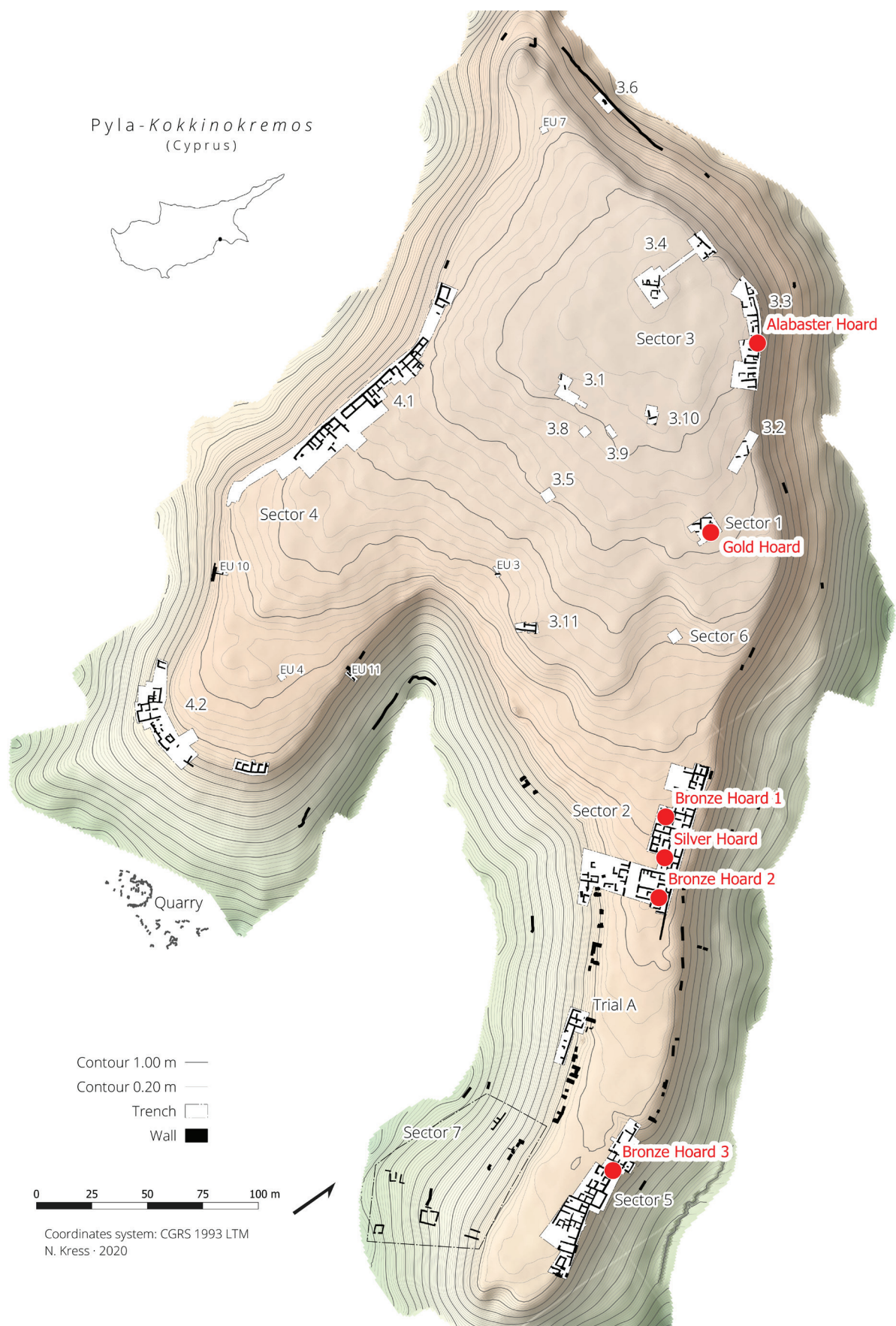


Figure 1. Topographical plan of the Pyla Kokkinokremos settlement, with indications of sectors and hoards (©C-PEPL, N. Kress)



Figure 2. View of the Pyla Kokkinokremos plateau (Sector 5) from the southeast (2019) (drone picture by G. De Hooghe)

slopes, were densely occupied (Bretschneider *et al.* 2015, 2017) (**Fig. 1**). Moreover, the traces recovered in the different sectors under excavation are now overwhelmingly in favour of seeing an almost identical radial lay-out around the entire hill of Pyla Kokkinokremos, consisting of a continuous outer wall (the casemate), possibly with a series of ‘bastions’ (Sectors 4.2, 5 and 7) at least towards the seaside or the south, where the Late Bronze Age harbour would have been located (Caraher *et al.* 2008: 85; Zomeni 2014; Caraher *et al.* 2015; Brown 2017: 276, fig. 2). Thus far two gates have been identified—one to the west (Sector 4.1) and a potential one to the northeast (Sector 3.3). They seem to have been relatively well hidden, simple and of small size; we suspect that an additional gate existed to the southwest, near Sector 7 (**Fig. 1**).

The regularity of the architecture and repetition of features (including shafts and channels) underlines the highly planned nature of the settlement and at the same time stresses its defensive and perhaps even military character (**Fig. 1**). The latter is enhanced by its topographical position, making the site a strategically placed regional stronghold which could easily have been home to several thousands of people. The indicated dense intramural occupation possibly suggests a need to remain behind the protection of the casemate structure. Despite the use of readily available building material and relatively simple masonry, there is considerable investment in the preparation of the terrain which involved frequent and systematic bedrock cutting either to install shafts for various purposes or to allow level building areas and ledges for wall foundation in the ‘*hypskaphon*’ technique (Kanta in Karageorghis & Kanta 2014: 113). It also seems clear that the site was built within a relatively short period of time and as a single process. As such, it resembles what has been noted for contemporary defensive sites on Crete (e.g. Kastrokephala and Orne, cf. Kanta & Kontopodi 2011; Kanta *et al.* 2021). All this suggests considerable group effort and the existence of a central authority even if the nature of this authority eludes us for the moment. This authority may also have been responsible for the functional organisation of the settlement with certain areas reserved for metal production and domestic industries related to textiles.

Since its initial exploration, the number and variety of non-local products at Pyla Kokkinokremos have been commented upon (Karageorghis & Kanta 2014: *passim*; Georgiou 2012; Karageorghis & Georgiou 2012). A recent reappraisal of published material thus far puts this at ca 29% (Joakim 2016). While the ongoing excavations at Hala Sultan Tekke are instructive in contextualising these non-local products (Fischer & Bürge 2018; Bürge & Fischer 2020), it stresses the international entanglements of the Larnaca Bay communities to a degree hitherto unparalleled by other contemporary Cypriot settlements. It is these non-local products, including a series of recently found Sardinian storage jars and

table ware (Bretschneider *et al.* in press; Bürge & Fischer 2020), that evidently have fed the potential links between the Pyla Kokkinokremos occupants and non-local, migrating groups such as those mentioned under the general label of ‘Sea People’ in Near Eastern and Egyptian texts (e.g. Killebrew & Lehmann 2013; Fischer & Bürge 2017; Ben-Dor Evian 2018; Wüthrich & Matic in this volume). While the ongoing excavations at Pyla Kokkinokremos have yielded valuable evidence to reconsider this question, adding to Karageorghis’ re-evaluation (in Karageorghis & Kanta 2014: 155–162), the present paper is more concerned with trying to explain the apparently sudden abandonment of the settlement and answering the question whether Pyla Kokkinokremos can be considered as a time capsule in the sense not only that the deposits encountered during excavation faithfully reflect the moment and conditions of the last days of occupation of the site but also, in a more general way, reflect a single period of habitation, without prior or posterior occupation. In this regard, we also discuss the hoards of precious objects that have been found within the successive excavation campaigns since they suggest last-moment interventions.

Time capsule?

The sudden abandonment of the settlement at Pyla Kokkinokremos is worth stressing: most rooms were left with their pottery in place as well as other objects, including quite a few in metal, which is usually rather rare in contexts of abandonment. The rich floor deposits present throughout the settlement—including undoubtedly very valuable ceramic vessels and calcite vases—seem to indicate that the abandonment process was precipitous. In contrast, weapons are rare apart from an occasional arrowhead, a scale of armour and some spear points. Sling shots, however, either isolated or in groups, and in bronze or lead (from Spaces 4.1.36, 5.22), stone (from Spaces 4.18–19) or clay are relatively frequent (**Fig. 3**). At this moment of our explorations, the relative date of the abandonment at Pyla Kokkinokremos can be placed at the very end of LC IIC, giving an absolute date early in the 12th century BC (**Table 1**). Our best chronological markers are an Argive deep bowl from the 2010–2011 excavation dated to LH IIIC Early 1 (first quarter 12th century BC)



Figure 3. Collection of lead slingshots from Space 5.22 in Sector 5 (J. Bretschneider)

Chronological phase: Cyprus	Maa Palaeokastro	Enkomi	Hala Sultan Tekke	Pyla Kokkinokremos	Historical	Ugarit: Tell Tweini	Amurru: Tell Kazel
LC IIC2 1250–1190 (Å.) 1250–1200 (F.B.)	Period I/ Floor II	Enkomi IIIB <i>LH IIIB Developed</i> – <i>LH IIIC Early 1</i> Destruction	Stratum 3(A) LC IIC	Pyla <i>LH IIIB Developed</i> – <i>LH IIIC Early 1</i> Destruction ?/ Abandonment	1195: throne accession of Ramesses III (Schneider 2010) 1186 / (1177*): year 8 (Battle of Djahy: Ramesses III against Sea Peoples)	Level 7A <i>LH IIIB</i> – <i>LH IIIC Early 1</i> Destruction	II: 6 upper / IV: 5 upper <i>LH IIIB Final</i> – <i>LH IIIC Early 1</i> Destruction
LC IIIA1 1190–1175 (Å.) 1200–1150 (F.B.)	Period I/ Floor II Destruction	Enkomi IIIA <i>LH IIIC Early 2</i> – <i>LH IIIC Developed</i> Destruction	Stratum 2 LC IIIA (early) Destruction Stratum 1 LC IIIA Destruction/ Abandonment			Level 6GH <i>LH IIIC Early</i>	II: 5 / IV: 4 <i>LH IIIC Early</i> – <i>LH IIIC Middle</i>
LC IIIA2 1175–1125/1100 (Å.) 1150–1100 (F.B.)	Period II/ Floor I <i>LC IIIA</i> Abandonment	Enkomi IIIB Early <i>LH IIIC Developed</i> – <i>LH IIIC Advanced</i> Destruction				Level 6EF Destruction (ca 1050–1000)	

Table 1. Comparative stratigraphy, absolute chronology and Aegean synchronisms.
*Italics = date of Aegean-type pottery (both imported and locally made) present in different contexts (adapted after Jung 2018b: 293 table 19.1; Mountjoy 2018: 22, table 1; Fischer & Bürgel 2018: 605–607, tables 10.1, 10.2; Bürgel in this volume). Throne accession of Ramesses III in 1195 BC (Schneider 2010). * (according to Kitchen 1987). Å. = Åström; F.B. = Fischer & Bürgel*

(Karageorghis & Kanta 2014: 141: pl. VI.60) and another deep bowl from Sector 4, which is very similar to vases of this shape and decoration from the old excavations at Pyla Kokkinokremos (Bretschneider *et al.* 2015: 32, fig. 27) (Fig. 4). The dating of these vases is discussed by Kanta (2003: 530–531). The recent excavations have brought to light more vases dating from LH IIIC1 of typical shapes such as a deep bowl and a kylix (Bretschneider *et al.* in press).



Figure 4. Deep bowl from Sector 4 (J. Bretschneider)

During the successive excavations at Pyla Kokkinokremos, a considerable number of objects were found in position, a depositional condition that contrasts, for example, with that encountered at Hala Sultan Tekke and Kition, where the degree of fragmentation of the contemporaneous ceramic deposits is generally higher than at Pyla Kokkinokremos (Fischer & Bürge 2018; Karageorghis & Demas 1985). A sizeable proportion of the ceramic vessels from Pyla Kokkinokremos can be reconstructed due to the completeness of the body material. While larger vases are often broken through earth pressure, agricultural exploitation and perhaps more recent intrusions, many smaller vessels and a variety of objects of stone, bronze and faience are found intact and seem to be lying in the places where they were left or had fallen close to the place where they had originally been kept or stored. There can hence be little doubt that, at least in general, the Pyla Kokkinokremos archaeological record reflects a relatively rapidly sealed situation that initially suffered little from cultural or natural post-depositional processes. Situations like these are often known as answering to the *Pompeii premise*, a condition in which one assumes that the archaeological context reflects a time freeze or capsule, that objects and their find-spots accurately mirror the situation prior to the deposition and were immediately sealed by burial. It has received plenty of attention in archaeology but is now generally regarded as a fallacy (e.g. Binford 1981; Murray 1999; Lucas 2008; Hardin 2010; Driessen 2013). Where Pyla Kokkinokremos is concerned, the main question is whether the deposits encountered in general reflect ongoing activities—the normal conditions within the settlement and hence the *de facto* refuse or

a primary behavioural context, and hence an element of unintentionality—or whether the deposits reflect a critical event, the interference of a specific human or natural agent and hence a considerable element of intentionality (cf. Dawdy 2006: 720). We believe the Pyla Kokkinokremos archaeological record reflects both situations. As discussed elsewhere (Driessen 1995, 2002, 2013), if the termination event was to some degree announced or predictable, normal behavioural patterns may already have been affected (Rosen 1987: 92; Hardin 2010: 43) and hence the material culture and patterning present in the abandonment layer may reflect this rather than the normal situation. At Pyla Kokkinokremos, however, it is difficult to make this distinction. Within Sector 5, for example, there are two contexts which seem to reflect suddenly interrupted workshop activities. In Space 5.31, there was a stack of three dozen, carefully deposited, copper slag chunks and next to this a pithos, a large lump of lead of 2.5kg and stone hammers and it is difficult not to see this as a routine assemblage (Fig. 5). In the nearby Space 5.35, a workshop that may have been occupied producing stone loom weights, altogether 17 of these were found, it seems, as they had been left. Raw stones and half-finished loom weights lie neatly next to completely finished weights. At least these two assemblages seem to suggest that the find situation encountered largely reflects the final activities taking place in these spaces as if frozen in time.

On the other hand, it has also become clear that the Pyla Kokkinokremos archaeological record is considerably cumulative, meaning that many of the objects encountered are residual and much older than the moment of final deposition, which should be early in the 12th century BC. A clear example is a Mycenaean LH IIIB1 amphoroid chariot krater from Sector II (Karageorghis & Kanta 2014: colour plate 1). Quite a few vases that are imports would, in Aegean terms, date to the early 13th century BC. Whether these vases were heirlooms or recently obtained through raiding or tomb or house looting (e.g. at Ugarit where especially amphoroid kraters are common in the tombs) is difficult to ascertain. Since quite a number of parallels exist between the material culture of Pyla Kokkinokremos and that encountered at Ugarit/Ras Shamra, it remains a possibility that some objects were acquired there, either through normal exchange or through what is known as negative reciprocity (piracy, loot) (cf. Muhly 1980: 160 on Kition Tomb 9; Bretschneider *et al.* 2021). It also remains difficult to distinguish between normal and unhabitual depositional patterns. At Pyla Kokkinokremos, however, the abnormality of the encountered depositional pattern is indicated by several features that suggest last-moment interference before assemblages were sealed. This last-moment-interference may reflect looting by those responsible for the abandonment of the site. Heavy and breakable clay vases of large size are normally left behind, even



Figure 5. In situ deposit in Space 5.31 of Sector 5 (J. Bretschneider)



Figure 6. Room 5.19, base of a bathtub thrown into shaft (J. Bretschneider)

if their contents are removed. If there is a particularly valuable clay container, however, looters may have taken it. Such may have been the intention where the fine chariot krater with warrior representations and lead repairs is concerned (Karageorghis & Demas 1984: 10–11, 33, 50, 67, pls XVIII.12, XXXIII). The base of this vase was found by Dikaios in 1952 in a shaft in Space 5 in Sector 2 while body fragments were found in 1981 in the adjacent Space 9 and others elsewhere (Karageorghis 1982: 77, postscript). The vase may have been abandoned because it broke; it had already been mended with lead clamps and was obviously very fragile. Occasionally, small and medium-sized vases are found broken with their fragments scattered throughout different neighbouring rooms or even in shafts. Fragments of the pictorial style krater PK15 422 (Caloi in Bretschneider *et al.* 2017: 109–113, figs 84–86), for example, were found in Spaces 5.3, 5.7 and 5.8 and fragments of a pictorial style bell krater PK14 172 (Caloi in Bretschneider *et al.* 2017: 113, fig. 87) were found in Room 5.15 as well as on the floor and in the shaft in Space 5.5. Within the rock-cut shaft in Space 5.19, the large and heavy base of a bathtub (L00612-M001) was found, and this too seems to have been deliberately thrown into the shaft (**Fig. 6**). The numerous hidden assemblages of valuables or hoards are the best evidence of the residents' last-moment concerns and efforts to create stocks that in the future could permit re-establishing normality. Rather than being associated with wealth accumulation or ritualised structured deposition, most of them are more likely to be emergency hoards, deposited by owners who intended to return and retrieve them (already Bolin 1926; Casey 1986).

The hoards

The discovery of a hoard of precious metal was in fact the reason why the site was initially explored by Dikaios, who did a trial excavation based on the information provided by the looter (Karageorghis & Demas 1984: 1, n. 1). This 'treasure' of primarily gold jewellery was actually found in a pit within a courtyard in what was later known as Sector 1 (**Fig. 1**: 'Gold Hoard') (Karageorghis & Demas 1984: 22–23, 60–62). It is discussed in detail by Karageorghis and Demas (1984: 60). It comprised a pair of earrings, five single earrings, 16 beads, all in gold, and four fragments of gold sheet as well sheets of scrap metal and a bronze tripod (Karageorghis & Demas 1984: 60–61, pl. XXVIII). In 1981, Karageorghis and Demas continued Dikaios' exploration, which also included work in Sector 2, more to the south of Sector 1 (**Fig. 1**). They completed the excavation of what is now known as Complex A and added several new similar buildings to the plan, sharing a single outside wall, known as the casemate. Within Complex B, a shallow pit in courtyard 22 yielded an assemblage of bronze objects (Karageorghis & Demas 1984: 12) (**Fig. 1**:

'Bronze Hoard 1'). It comprised a weight, a spearhead, a male figurine, two drills, a fragment of an ingot, a fragment of a bowl and a complete one, a pair of cymbals, some scrap and a scale of armour, all in bronze (Karageorghis & Demas 1984: 37–38, 63–64, cat. nos 60–69). South of Complex C, in the 0.17m gap between two walls of a courtyard, was a further small hoard consisting of two silver ingots and fragments of a silver bowl, lying on a large pithos sherd within a drain (Karageorghis & Demas 1984: 16, 42, 64–65, cat. nos 112–114, pls XXVIII, XLV; also Karageorghis & Kanta 2014: 12–13) (**Fig. 1**: 'Silver Hoard'). These three hoards were found in or next to courtyards while the ones found later come from within buildings. When excavations resumed in Sector 2 in 2010, a hoard of bronzes was found in Room 7+41 of Complex G (**Fig. 1**: 'Bronze Hoard 2'). This comprised about 30 items, probably originally hidden in one of the vases of the room (Karageorghis & Kanta 2014: 55, pl. XIX). It included several fragmentary bronze objects and scrap bronze as well as a bracelet, a pendant, an earring and a spearhead.

During the latest excavation campaigns at Pyla Kokkinokremos (2014–2019), several more instances of hidden objects and hoards were discovered. Sometimes, individual valuable objects are concealed, such as a gold chisel-like bar in the corner of workshop Space 4.2.8 in Sector 4, or a fragment of a copper ingot and a folded gold plaque, cached within a plaster ball, placed (or washed?) into a 3.40m deep shaft of Space 5.40 in Sector 5 (Bretschneider *et al.* in press). Sometimes, metal objects are found behind or underneath vases or stones or in cracks, which suggests that they were hidden (e.g. an arrowhead from Space 5.28, cf. Bretschneider *et al.* in press). Two cases, however, are exceptional, and deserve more detailed treatment. The first concerns 29 copper-based objects, originally perhaps in a bag, buried beneath the floor of Space 5.2 in Sector 5 (cf. **Fig. 1** 'Bronze Hoard 3'), the second a collection of valuable objects and materials found within an Egyptian calcite vase, hidden behind a jar in Space 3.8.3 of Sector 3 (cf. **Fig. 1** 'Alabaster Hoard').

Sector 5 is located on the southeast lobe of the summit where the plateau is at its narrowest (**Fig. 1**). At the end of the 2019 campaign, up to 47 rooms were exposed (**Fig. 7**), seemingly forming a single, continuous structure. While one of the objectives that guided excavation in this sector was to determine whether the assumed casemate wall—found in most other areas of the hill and conceivably enclosing the entire plateau—was also present on this southern outcrop, we are, for the moment, unable to confirm this without some hesitation. A clear north–south external façade is not present. In contrast, a more irregular façade line was brought to light with an eastern limit that consists of walls that protrude and are located at different levels of the eastern slope. These protrusions could imply that the projections



Figure 7. Sector 5 from the southeast (drone picture by G. De Hooghe)

formed some kind of bastions. The presence, however, of a large pithos further downhill seems to suggest the existence of potential architectural structures to the east of this line, but more exploration is needed. The overall planning and outline of the rooms in Sector 5 are similar to those found in the other sectors, as are the corridor-shaped spaces, the plastered floors, the *hypskaphon* technique and the presence of bedrock-cut shafts. With eleven examples, including three quite monumental ones, the latter are a very prominent feature of this sector. Almost all shafts are located in rooms adjacent to the outer wall. In some shafts, valuable objects were found, such as a decorated Egyptian calcite drop jar and the already mentioned folded foil of gold, wrapped in a plaster ball.

Within this complex, one of the spaces (Room 5.2) was either a square room whose western wall was destroyed by a modern trench for an electricity cable, or a large L-shaped room. The eastern border of the room is formed by the casemate wall. Within the floor bedding, which has a thickness of about 10cm in order to level the uneven bedrock, a collection of 29 metal objects was found (Fig. 8). All the metals were laying close together, some on top of each other, others fused together by corrosion, and still others covered with slag, but all were arranged in a similar direction,

east-west, as if they had been contained in a textile or leather bag that has since deteriorated (Bretschneider *et al.* 2015: 25, figs 21–22). The assemblage (Fig. 9) comprises 26 bronze tools, including pin-shaped needles, simple pins, pointed tools, an object shaped like a tuning fork, tweezers (measuring 26.9cm), a beam-shaped tool (measuring 25.2cm) and a 15.8cm long socketed spearhead. A lead object and two pieces of slag completed the assemblage.

Since one of the concerns of the new Pyla Kokkinokremos project was to determine whether the west and north parts of the plateau had a similar occupational history and architectural development as the southeast part where most of the early explorations had taken place, test trenches were placed in the western part from 2012 onwards (Sector 4) (Kanta 2014: 103–112); beginning in 2014, soundings were made in the central and north part of the plateau (Sector 3) (Jusseret in Bretschneider *et al.* 2015: 6). In the very northeastern part of the site, the damaged remains of the casemate wall, perhaps with a small gate, were identified (Jusseret in Bretschneider *et al.* 2015: 9) (Fig. 10). A series of small, parallel rooms is associated with this outer wall. Although the walls are often badly damaged and wall lines can only be traced through cut marks made in the bedrock



Figure 8. Bronze Hoard 3 as found (J. Bretschneider)



Figure 9. Bronze Hoard 3 (J. Bretschneider)

for their foundations, the floor assemblages were in a relatively good condition. In some of the rooms there was plenty of evidence for metal production and to a lesser extent, textile manufacture (Jusseret in Bretschneider *et al.* 2015: 9; 2017: 47). One of the rooms, Space 3.8.3, however, was largely empty, apart from a large Canaanite jar (Bretschneider *et al.* 2017: 51–52, figs 13–14). Hidden behind this jar was an

intact alabaster pilgrim flask (Fig. 11). The following description of the vase and its contents was kindly provided by Simon Jusseret, who was in charge of the excavation in this area. The vase, 0.315m high, has a lentoid (carinated) body and a rounded base. Faint traces of a dark painted decoration were visible on one side of the vase only, between the shoulder area and the mid-body. Careful cleaning of the flask at the



Figure 10. Sector 3 (2017) (©C-PEPL, drone picture by N. Kress)



Figure 11. Alabaster Hoard: vase, decoration and contents (J. Bretschneider)

Larnaca Museum by our conservator, Constantina Hadjivasili, revealed a frieze of petals above a row of discs supported by lines from which hang three lotus flowers (Fig. 11). Interestingly, the upper part of this composition, the frieze of petals and row of discs, parallels the decoration of an alabaster jug found by Karageorghis and Demas (1984: 37, pls XXIX, XLVI) in Sector 2 (inv. no. 59). The ‘awkward’ character of the jug’s decoration (a combination of paint and low relief) suggested to Karageorghis and Demas (1984:

53) the possibility that this composition had been made locally, in imitation of the Egyptian style.

During the cleaning of the alabaster pilgrim flask, it was found that the sediment within contained a large number of objects, a few of which probably had some value (Fig. 11). The most surprising object was a fine Cypriot cylinder seal with duplicated frieze. There were also three beads made of semi-precious stone (brecciated red jasper, turquoise and/or picrolite?); one of the beads still contained the remains of organic

thread, raising the possibility that at least some of the items contained in the flask (beads, cylinder seal, spindle whorl?) had been strung together, perhaps as part of a necklace. Among the metal finds was a bronze knife very similar to the bronze knife (no. 9) found in 1981–1982 in Room 13 of Complex B in Sector 2 (Karageorghis & Demas 1984: 10, pls XXVII, XLV). There was also a bronze tool with an anthropomorphic handle (Polig *et al.* in press). The tapered edge of this object is comparable to that of another tool uncovered in 1982 at Pyla Kokkinokremos (Karageorghis & Demas 1984: 57, pls XXVII, XLV) as part of the ‘Founder’s Hoard’ (see above ‘Bronze Hoard 1’). Karageorghis and Demas (1984: 57) interpreted this tool (inv. no. 4) as a scraper or a double spatula. The flat-topped headdress or stylised hair and protruding nose and ears of the anthropomorphic handle are likewise reminiscent of the human figurine (inv. no. 62) found in the same Bronze Hoard 1 (Karageorghis & Demas 1984: 55, pls XXV, XLIV). However, the manufacture of Space 3.8.3’s anthropomorphic tool appears finer than the somewhat crude modelling of Sector 2’s figurine. A full publication of the technical features of this object has been offered elsewhere (Polig *et al.* in press). There was also an unidentified bronze object with an oxbow shape, almost identical to the shape of the knife’s handle. Of the three bronze rings, one has a cross-like incision. The assemblage also included a chunk of blue glass, perhaps an ingot fragment and almost certainly imported from Egypt (cf. Henderson *et al.* 2010: 15; Jackson & Nicholson 2010). There was also a spindle whorl decorated with circular motifs, and a tube-like container made of ivory that resembles the horn-like instrument from the Uluburun wreck (Aruz *et al.* 2008: 340, fig. 207). This last object may have been broken or crushed and forced into the flask since, as restored, it is too large to have been inserted in the mouth of the alabaster vase.

Hoarding in times of crisis

How should we interpret these concentrated accumulations of valuables? While some of the assemblages discussed here mix recyclable items and scrap metals with finished products in impeccable condition and Bronze Hoard 1 is known as the ‘Founder’s Hoard’ (Karageorghis & Demas 1984: 55–57, 63–64, pls XXV, XLIV), the repetition of hidden collections all over the site favours interpreting all these assemblages as reflecting a single behavioural pattern (Kassianidou 2018). The interpretation that these were emergency hoards, concealed at a time of danger and hence showing some knowledge of an impending disaster, seems most likely and was already suggested by Karageorghis and Demas (1984: 62, 74). It also seems clear that the residents intended to recover their possessions later. The alternative explanations—seeing most of the hoards as discards, foundation deposits or reflecting ritual behaviour—

seem not to be acceptable for various reasons, even if similar cases where objects were hidden have received such an interpretation (Matthäus & Schumacher-Matthäus 1986; cf. Knapp 1988). The deliberate deposition and taking out of circulation for votive reasons is, to some degree, seen as a destruction of wealth (Bradley 1990: 75). Importantly, there is no intention for later recovery in these cases (Knapp 1988: 155). Depositions for religious reasons usually contain specific types of artefacts—religious imagery, precious or exotic material—and are found in a distinctive context (architectural or other) that may be regarded as a transitional space (shrines, temples, rivers). They usually also contain non-functional items (Bradley 1990; Osborne 2004). None of these features are present at Pyla Kokkinokremos. It is also improbable that our assemblages are foundation hoards (i.e., assemblages that create a special status for the locus of deposition; Osborne 2004: 7), since none of the cases shows a specific link with a particular feature, architectural or otherwise. It also seems difficult to interpret the Pyla Kokkinokremos deposits as structured depositions, perhaps dictated by the state as a *ta-ra-si-ja* allotment as part of the redistributive system, as Nicholas G. Blackwell (2018) has proposed for Mycenaean hoards.

Seeing the metal assemblages as hoards that were eventually meant to be recovered evidently also implies that metals in general and precious metals in particular formed part of a particular value system (e.g. Millett 1995: 100), which may be compared to the possible existence of a value system connected to obsidian during the Neolithic (Conolly 2003). More or less contemporary hoards of metal objects are also known from other Mycenaean, Cypriot and Levantine settlements including Sinda, Enkomi, Ugarit and Jatt (Spyropoulos 1972; Muhly 1980; Knapp 1988; Artzy 2006; Kassianidou 2018). A. Bernard Knapp (1988: 154) conveniently presented the hoards known at the time in a table, which illustrates a concentration of hoards on Cyprus during LC IIC and IIIA. While these different hoard finds may illustrate a wider pattern of uncertainty in the advanced Late Bronze Age Mediterranean, a detailed analysis of each case within its historical context is necessary.

These hoards, together with floor deposits containing objects left *in situ* in apparent sudden haste, and their distribution over the Pyla Kokkinokremos site, illustrate the abruptness of the abandonment process of the settlement. The different collections of metal—the currency of the Bronze Age—seem clearly to suggest that there must have been some prior warning so that people had the time to collect a number of valuables and recyclable metals that had intrinsic value and hide these in dark areas or in areas that would not be noticed by non-locals. The concentration of hoards along the east side of the plateau could conceivably also imply that the inhabitants of this area of the settlement had more time than those on the west to hide valuables. If this hypothesis is accepted, then the possibility that

more last-moment-actions were undertaken cannot be excluded. It also should warn against taking the find positions of objects as granted for functional analyses since some last moment interference and moving around may have taken place.

In times of extreme crisis, it is primarily metal objects that retain their value and it is these that are mostly hidden. One only hides something if one expects recovery at a later stage. This did not happen, however. As discussed by Igor Kreimerman (this volume), settlement destructions are usually preceded by substantial looting. Looting or interference seems to have taken place at Pyla Kokkinokremos but the entire settlement was not set on fire, nor was it apparently systematically looted. The site was abandoned by its residents, and ceiling, roof and wall collapse probably happened swiftly, since we were not able to identify any scavenging of materials. Natural taphonomic processes did their work in covering and sealing the site rapidly.

We may then ask whether the occupants left the settlement voluntarily or were forced to leave. The residents of Pyla Kokkinokremos may have voluntarily abandoned their homes, intending their absence to be temporary, but for unknown reasons they never returned. In this case, they could have left with boats from the harbour, which is assumed to have been located at the southern foot of the plateau (also Brown 2017). The abandonment could have been because of fear of enemy attack, exposure to sickness, death, bad luck or evil spirits, or caused by famine. It could also have taken the character of a migration. A potential scenario could be, for example, that the inhabitants had launched a (military?) expedition (e.g. to Egypt), which may have been so unsuccessful that the boats were ruined, preventing return. But the abandonment could also have been enforced by a hostile power (e.g. nearby Kition) during which some inhabitants just had the time to hide some valuables, hoping for an eventual return. The site may also have been declared taboo by its own inhabitants or a nearby power, preventing intrusion (on taboo in archaeology, see Fowles 2008; Robbins 2009; Telban & Vavrova 2010; Gaignerot-Driessen 2013). While we do believe the Pyla Kokkinokremos event was part of a more general historical process, we should not entirely exclude other explanations.

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