

**Pyla-Koutsopetria Archaeological Project (PKAP)  
Final Report 2007 Field and Study Season**

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**I. Introduction (Caraher, Moore, Pettegrew)**

The Pyla-Koutsopetria Archaeological Project recently completed its fifth season of fieldwork at the site of Pyla-Koutsopetria under the direction of Professor William Caraher (University of North Dakota), Professor R. Scott Moore (Indiana University of Pennsylvania) and Professor David K. Pettegrew (Messiah College) and in collaboration with Dr. Maria Hadjicosti of the Department of Antiquities. Several specialists joined us for our 5-week season: Professor Dimitri Nakassis (Florida State University), Michael Brown (University of Edinburgh), Sarah Lepinski (Bryn Mawr College), Brandon Olson (University of North Dakota), Greg Fisher (Kebble College, Oxford), Matt Dalton, and Katie Pettegrew. Two graduate students from University of North Dakota and the University of New Hampshire, four undergraduates from Indiana University of Pennsylvania also joined the PKAP team. The 5-week 2007 field and study seasons (May 15-June 23) saw the successful completion of five tasks:

1. The completion of over 20,000 sq. m. of geophysical survey at the sites of Pyla-Koutsopetria and Pyla-Kokkinokremos under the direction of Michael Brown of the University of Edinburgh and John Hunt of Limassol.
2. Close to 30 ha of intensive, pedestrian survey primarily concentrating on the top of the ridge of Kokkinokremos and the inland coastal plateau extending north from the height of Vigla.
3. The documentation of architecture on both the height of Vigla and Kokkinokremos.
4. The completion of a catalogue of diagnostic and notable artifacts accounting for nearly 5% of all artifacts collected over the course of the 2004 and 2005 field seasons.
5. The continued study of the painted plaster and molded gypsum excavated from the site of Pyla-Koutsopetria by Maria Hadjicosti in 1993 and 1999.

**II. Survey Method and Results**

*a. Introduction*

Archaeological survey during the 2007 field season focused upon documenting the immediate micro-region immediately north and northeast of the Roman site of Pyla-Koutsopetria,<sup>1</sup> and conducting an intensive survey of the Bronze Age site of Pyla-Kokkinokremos. Following from this goal, fieldwork during the 2007 season comprised four facets of work (**Fig. 1**):

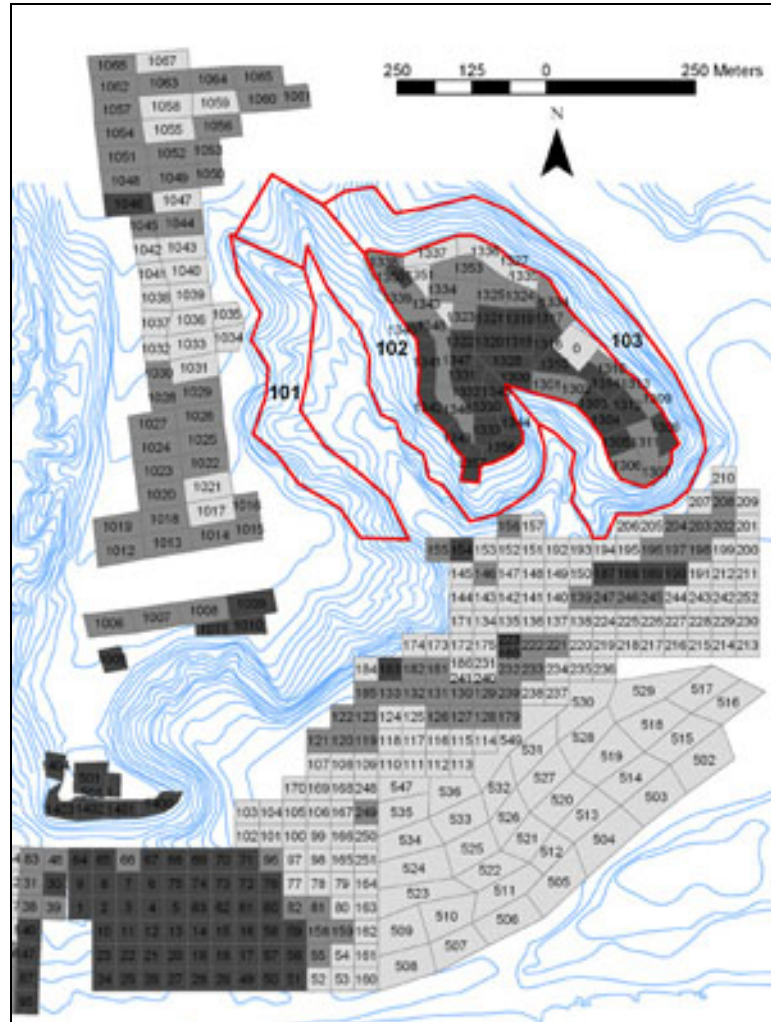
1. A continuation of the extensive survey of the long ridge between the sites of Vigla and Kokkinokremos.
2. Conducting an intensive survey of the plateau north of the sites of Vigla, Pyla-Koutsopetria, and Pyla-Kokkinokremos.

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<sup>1</sup> The intensive gridded survey of the site of Pyla-Koutsopetria proper was completed in 2005, and the preliminary reports of this survey are published in the 2005 and 2007 issues of the *RDAC*.

3. Conducting an intensive survey of the site and ridges of the site of Pyla-Kokkinokremos.
4. Conducting an intensive survey of the slopes immediately below and south of Vigla.

These different projects occurred over a three-week period from May 22 to June 14. At the end of survey, we pulled the orange flags used to lay out the units. The four components of our survey work are described in detail in the subsections below.



**Fig. 1.** Survey Units (extensive & intensive) through 2007

*b. Ridge Survey (Pettegrew)*

A principal focus of fieldwork activities in June 2007 was continuing the documentation of cultural features on the ridge that separates the plateau from the coastal plain below. This ridge extends from below the site of Vigla on the west to the area of Mavrospilios on the east (below Kokkinokremos). Survey of the western line of this ridge (from Vigla to Grid Square 155) in 2006 had revealed looter pits, quarry cuttings, cut stairs, and a LR fortification wall at Vigla, among other things.

Methods in 2007 were the same as 2006. For the ridge survey, two to five field walkers spaced at 10-20 meter intervals walked along the slopes, from west to east, walking in accordance with the contours of the slope. Field walkers noted variable artifact densities in the area and looked for features. We collected a few ceramic finds and recorded information about artifacts and features: dimensions, photographs, GPS points, and basic descriptions.

The results can be summarized as follows for three major sections of the ridge, which we surveyed over a course of three days:

- Extensive Unit 101: Western side of the Mavrospilos gully west of Kokkinokremos
- Extensive Unit 102: Eastern side of the Mavrospilos gully west of Kokkinokremos, wrapping around the western finger of Kokkinokremos
- Extensive Unit 103: Slopes below eastern side of Kokkinokremos

### *1. Extensive Unit 101: Western Side of Mavrospilos Gully*

Personnel: Six field walkers at 10-meter intervals, from 4:30 pm to 6:30 pm, on Monday, June 4.

#### Artifact Densities:

- Low to moderate artifact densities right at the start (southern end) of the extensive survey unit. Includes some black-glazed pottery.
- At north end, low densities of pottery on slope, including a well-preserved piece of Geometric.

#### Features:

- There are many curious limestone overhangs, but nothing that is obviously cultural; many are probably simply the products of geological erosion.
- Limestone quarry cuttings, with clear right angles that demonstrate quarrying. UTM point: 564970 E, 3871854 N
- Round feature—may be natural—near top of slope. Photographed. UTM point: 564875 N, 3871839 E
- Possible wall at 564884 N, 3871876 E. Black glazed potsherds found nearby. Photographed.
- At NW corner, where ridge rounds (east of Survey Units 1025 & 1026), another cut hole at ridge top: much pottery down slope; the bedrock holes appear to be natural.
- At Northern end of unit, a rectangular slit—cutting?—but no regularities, but it also does not look natural. Approximately 2 meters x 8 meters.
- Bedrock cuts at northern end: quarry cuts at several points in limestone bedrock,  
564698 N / 3872428 E  
564727 N / 3872481 E  
564732 N / 3872494 E

### *2. Extensive Unit 102: Eastern Side of Mavrospilos Gully to West of Kokkinokremos*

Personnel: Five field walkers at 10-meter intervals, from 4:30 pm to 6:30 pm, Tuesday June 6.

#### Artifact Densities:

At northwest corner, we documented a low-density scatter. Artifacts noticed include coarseware ancient historic, ground stone. One piece of pottery collected at 0564815 N / 3872384 E. Artifact densities increase to moderate density on slopes below western finger of Kokkinokremos, which obviously represents material washed down slope from Kokkinokremos plateau. However, the artifacts are denser at the top of the slope (closer to the site) than they are at the bottom.

#### Features:

- Natural cavities throughout these ridges, some caverns even, but in most cases, nothing regular.

---Round hole in bedrock, 20 cm. diameter: 0564973 N / 3872106 E  
---Five cuttings into bedrock that are regular, and probably represent rock-cut tombs:  
0565004 N / 3872097 E  
---More cuts, probably quarried, in bedrock: 0565043 N / 3871932 E, and 0565064 N /  
3871895 E  
---Within rockshelter, there are cuttings that may be cultural, although it is really difficult to  
tell because the bedrock fragments in regular ways: 0565177 N / 3871941 E

### *3. Extensive Unit 103: Slopes Below Eastern Side of Kokkinokremos*

Personnel: Two field walkers at 20 meter intervals, on Tuesday, June 12, 2007.

#### Artifact Densities:

---Moderate pottery scatter near top of ridge, between the two fingers of Kokkinokremos.  
But elsewhere, pottery density is moderate to very low.

#### Features:

---Check dam, between the two fingers of Kokkinokremos  
---Quarry cuts where gully opens out: 0565268 N / 3871953 E  
---Deep cavern, probably natural: 0565207 N / 3872332 E

#### *Conclusions & Results*

Now that the ridge survey has been completed, we can answer the major questions we had before beginning the survey in 2006:

- 1) In 2006, we were especially interested in whether there were tombs in the ridge associated with the site of Koutsopetria, as is common at other harbor settlements of the Mediterranean (e.g., Kenchreai in Greece; Matala in Crete). There is little undisputed evidence for cut tombs in the ridges, but some of the recesses could indicate such features. Some pits could be interpreted as looting attempts, but the abundance of natural recesses throughout makes it difficult to differentiate the two. There are two areas of cuttings, however, that probably represent tombs:
  - a. Survey of the slopes behind the water treatment plant in 2006 revealed a cave cut into the marl with two bisecting caverns that may represent a cut tomb. This cave was described in the 2006 report to the Cypriot DOA.
  - b. Survey of the slope below the western finger of *Kokkinokremos* (immediately west of units 1341-1343) revealed cuttings in the rock that appear to represent historic period (Archaic-Late Roman?) rock cut graves.
- 2) In 2006, we were also interested in determining whether high-density artifact scatters noted in the coastal plain derived from the ridges above the site or were associated with the use of the plain below. That is, we wanted to ascertain whether artifact densities on the plain were a product of geomorphological or cultural forces. This was especially important for the eastern end of the site (Area 2, east of the water treatment plant) where the moderate artifact densities were unexpected. Determining whether artifact scatters were geomorphological or cultural in origin was fundamental for estimating the size of the site. After surveying the ridges, we can now say very confidently that the higher densities of Zone 2 of the coastal plain do not appear to derive from the ridges above the site. Although we did find some ceramic material in the course of surveying the slopes, it was always very sporadic and scarce and therefore cannot explain the high densities below. Indeed, the area of Zone 2 appears to represent a continuation of buildings, habitation, or graves along a narrow strip of coastline in antiquity.

c. *Intensive Survey (Caraher, Pettegrew, Nakassis)*

During the 2007 field season, we conducted intensive survey in three areas: the plateau extending north from the ridge of Vigla, the lower slopes of the Vigla ridge, and the heart shaped ridge of Kokkinokremos. This work was supervised by a senior or junior staff member (David K. Pettegrew, Dimitri Nakassis, William Caraher, or Brandon Olson) with a team of undergraduates from Indiana University of Pennsylvania, graduate students from the University of North Dakota, Keeble College Oxford, and the University of New Hampshire, and experienced unaffiliated archaeologists. In general, the team used to survey the ridge of Kokkinokremos and the southern slopes of the Vigla ridge was more senior and experienced than the team that surveyed the inland area of Vigla.

1. *Intensive Survey of Plateau North of Vigla*

One principal goal of the 2007 season was to survey the ridge top that runs north from Vigla. The rationale for this investigation was to assess the degree to which habitation debris continues north from Vigla and also to produce the densities for the greater micro-region in which the sites of *Koutsopetria*, *Vigla*, and *Kokkinokremos* are situated.

Survey on the plateau occurred from Tuesday, May 22 to May 29. Field teams surveyed 67 survey units on the plateau (#s 1005-1071), although four survey units (1068-1071) were not mapped accurately with the result that the data for those units cannot be tied to real space. We also surveyed four units (#s 1001-1004) on the plain north of the plateau but, after speaking with UN authorities, came to realize that this area was part of the UN buffer zone.

Survey methods were much the same as those practiced on the plain below with four walkers spaced at ten meter intervals counting all pottery and tile and collecting according to the Chronotype method. The only main difference is that units were twice the size (40 x 80 meters = 3200 sq. m) of the grid units at *Koutsopetria*. We did, however, collect sub-tract density data every forty meters so that at a later point in time we will be able to create higher resolution (40 x 40 m) density maps.

Based on this systematic examination of the plateau north of Pyla-*Koutsopetria* and *Kokkinokremos*, we can say that while artifacts are continuous across this area, the densities are almost entirely low (< 1000 artifacts / ha) to moderate (1000-3000 artifacts / ha), with only one unit (1046) at high density (>3000 artifacts / ha). The predominant artifact structure of the plateau is low artifact densities with occasional localized moderate artifact densities that could represent small farmsteads or villas. Based on this work, however, the very high density site of *Koutsopetria* appears as an even brighter light east of Larnaka.

2. *Intensive Survey of Kokkinokremos*

In conjunction with Michael Brown's geophysical survey of the ridge of Pyla-*Kokkinokremos*, PKAP field teams conducted an intensive survey of the broad plateau that comprises the site of Pyla-*Kokkinokremos*, as well as the ridges immediately below it. The goals of this survey work were 1) to produce a density map of the surface remains to assess better the size and intra-site functional organization of the Bronze Age settlement site, and 2) to produce a record of artifactual data that can be compared to the geophysical information.

Survey Units:

Although we had initially planned to survey *Kokkinokremos* according to strictly gridded survey units—in accordance with the 40 x 40 m grid square system utilized in 2003-2005 for the coastal plain of *Koutsopetria*—we decided to modify the system for our survey of *Kokkinokremos* for several reasons: 1) It was clearly desirable to take into account the

results of the geophysical survey into our collection strategy. Although plowing has no doubt smeared artifacts from their original (if such a word can even be applied) context, some attempt at correlating archaeological and geophysical units seemed desirable. And, 2) the taphonomic processes affecting different areas of Kokkinokremos are highly variable; up on the plateau the soil has been extensively plowed and cultivated, while the slopes are unplowed and uncultivated.

Consequently, we surveyed the ridge using units defined by the following criteria:

1. Modern land use/visibility
2. Slope
3. Geophysical survey transects
4. Unit size

In practice, criterion (1) was virtually congruent with (2), in that the plateau of Kokkinokremos has been plowed and subject to agricultural activity, while the slopes are covered by sparse phrygana bushes with much bedrock exposed. Where the slopes of Kokkinokremos changed orientation, we placed survey unit boundaries at the change in direction (where often there were drainages for rain water runoff).

Criterion (3) meant that we covered Michael Brown's geophysical (resistivity) survey transects within as few archaeological survey units as possible, so that correlations between surface and sub-surface features might be possible. In at least one case, we did find a correlation: immediately SE of the excavated area, resistivity survey found no features, and this field (Survey Unit 1314) was surprisingly low-density.

We attempted to define units that approximated the area size of the grid squares on the *Koutsopetria* plain (1600 sq. m) in order to maintain comparability of the density data. In practice, this meant restricting the size of all units to between 1000 and 2000 sq. meters.

Units were initially laid out using compasses and range-finders, and then mapped using GPS points recorded with the Trimble, with sub-meter accuracy.

#### Survey Methods:

Survey methods were substantially the same as those practiced at PKAP, the only difference being that when clusters of pottery were encountered on the slopes below the plateau, walkers counted these sherds but did not collect them. This was done in the hopes that some of these scatters could be joined together and reconstructed.

Walkers collected according to the Chronotype method; all lithics were collected. Large heavy items, such as stone basins, stone vessels and groundstone fragments, were noted and photographed but not collected.

#### Preliminary Results:

Over the course of ten days (May 28-June 6), we surveyed 58 survey units (#s 1300-1357) that encompassed both fingers of the *Kokkinokremos* ridge as well as a forty-meter wide swath of slope below the ridge. Although the pottery and lithic artifacts have yet to be analyzed, we can note as a preliminary observation that the distribution of artifacts is continuous in moderate (2000-3000 artifacts / ha) to high (3000+ artifacts / ha) density across the entire plateau of *Kokkinokremos* as well as on the slopes below where artifacts have eroded. Moreover, the great majority of artifacts and features are Bronze Age in date, but we did record an appreciable amount of Roman and Late Roman material, including Roman glass and Early and Late Roman pottery, and presumably historic-period rock-cut tombs. A full analysis of this material in 2008 will provide more detailed assessments of the Kokkinokremos survey.

### 3. *Intensive Survey of Slopes below Vigla*

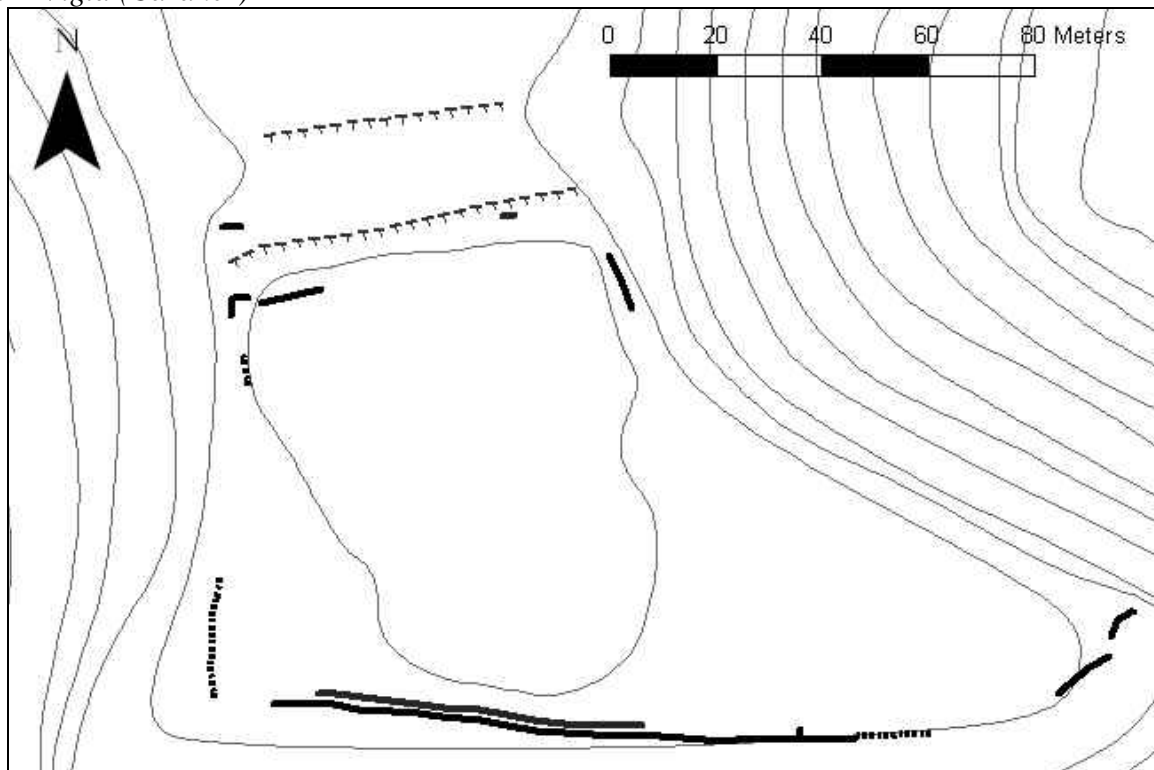
Surface investigations on the site of Vigla this year recorded a Late Antique fortification wall while geophysical survey produced results that suggested the subsurface remains of an early Christian (Late Antique) basilica church. While such features are consistent with the predominantly Late Roman material remains on the *Koutsopetria* plain below, they seemed inconsistent with the survey (Unit 501) of the ridge of Vigla itself, which produced ceramics of Archaic-Hellenistic date. To explain the lack of Late Roman ceramic remains on the ridge, we hypothesized that the later material may have eroded off the plateau and onto the slopes below. Moreover, extensive survey in 2006 demonstrated that the slopes below Vigla had very high artifact densities and so we surmised that intensively surveying the ridges through typical survey methods would produce a robust sample of pottery, and might turn up Late Roman material.

Consequently, on Monday, June 11, a field team of four walkers surveyed five survey units (#s 1400-1404) on the slopes below Vigla. Survey methods were substantially the same as those practiced on the plain below, with four walkers spaced at ten meter intervals counting all pottery and tile and collecting according to the Chronotype method.

Overall artifact densities were exceptionally high, with densities over 10,000 artifacts / ha, which is well above average densities for units surveyed at *Pyla-Koutsopetria*. While the artifacts have not yet been analyzed and will be read in the summer of 2008, preliminary observations suggest that most of the pottery is Classical or Hellenistic in date. However, we did note occasional early Roman pottery and much Late Roman pottery, including combed and grooved amphora, although there was very little Late Roman fineware and only a small number of tiles. The survey of the Vigla slopes demonstrates that there was, in fact, some Late Roman material on Vigla that has subsequently washed down the slopes. In other words, we have ceramic artifacts that are contemporary with the Late Roman fortification wall and possible early Christian church.

### III. Features

#### a. Vigla (Caraher)



## *Vigla Fortifications*

During 2007 field season, the PKAP team documented a significant fortification atop the coastal height of Vigla. Traces of the wall follow the contours of the plateau just below the top. The longest stretch of the wall extends for nearly 125 meters along Vigla's southern face – some 80 meters of which preserved both an outer and inner face – enabling us to determine a wall thickness of nearly 2 m. Erosion on the western and eastern sides of the hill has made the exact course of the wall difficult to discern. The remaining fragments along the western side of the hill, however, suggest that it took on a slightly concave shape to accommodate the shape of the height. On the eastern side of the hill, the wall arcs from the northeast to the southeast where it joins the north face. At this point, set on the bedrock, there remains a short stretch of curving wall built of stones set in mortar but less than 1 m in width. While erosion of the bedrock has significantly changed the eastern slope of the hill, it is possible that this curving wall is the remains of a circular or semi-circular tower at the wall's southern most extent.

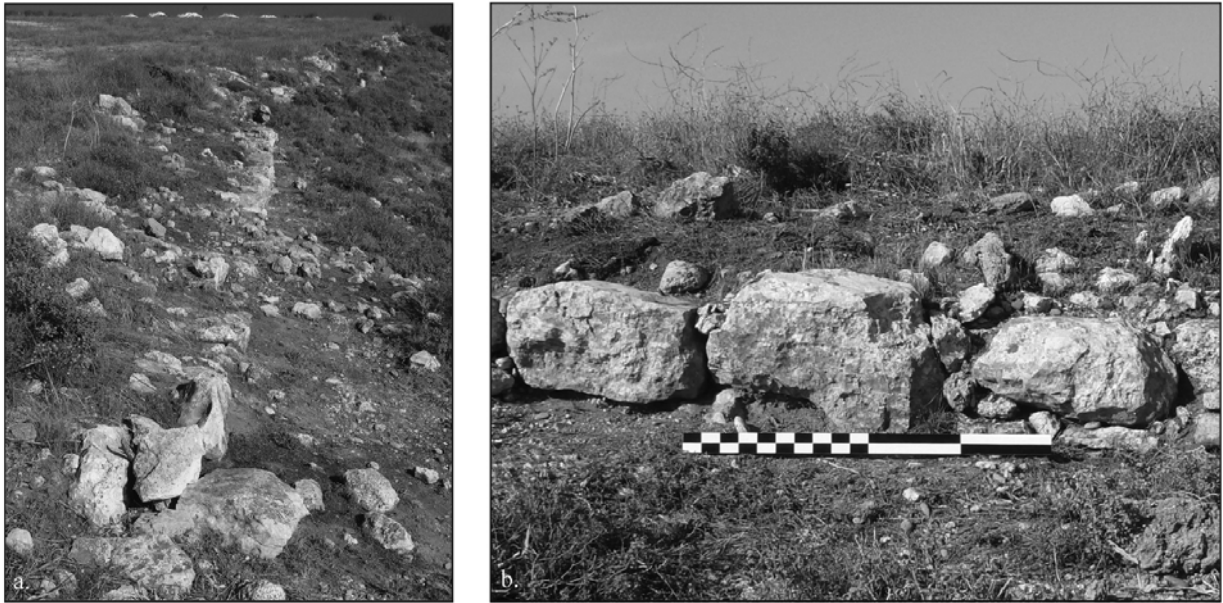
The northern face of the wall appears to be the most complex architecturally. The most striking feature is the pair of parallel bedrock cuts arranged some 20 meters apart forming a dry moat along the northern approach to the Vigla ridge. A stretch of mortared wall set 2 meters back from the southern side of the bedrock cut runs parallel to the cut for nearly 5 m. While the northern face of this wall is lost and little of the core is preserved, its location suggests that it was topped by a wall approximately the same thickness as the wall running along the southern face of the ridge. At the northwestern end of the southern bedrock cut, a significant mortar and rubble core is preserved. There are several extraneous walls associated with this structure some of which seems to follow the bearing of the bedrock cuts and others that do not. While we have not been able to discern a clear shape from this complex of walls, it is tempting to imagine them associated with a tower or gate set to defend the most likely route of access to the hill. The southern and eastern faces of Vigla are too steep to be easily negotiated leaving the most likely route running parallel to the western slope before turning east at the northwestern corner of the fortification.

The walls are composed of a two faces laid in irregular courses and composed of stones generally less than a meter in length. Few stones show any signs of being worked. The core of the wall consists of cobble embedded within a fine-grained gypsum mortar visible along the entire course of the wall. This construction technique and the similarities between the mortar on the wall and that found in association with the excavated Late Roman remains below the ridge top suggests a Late Roman date for the entire fortification.

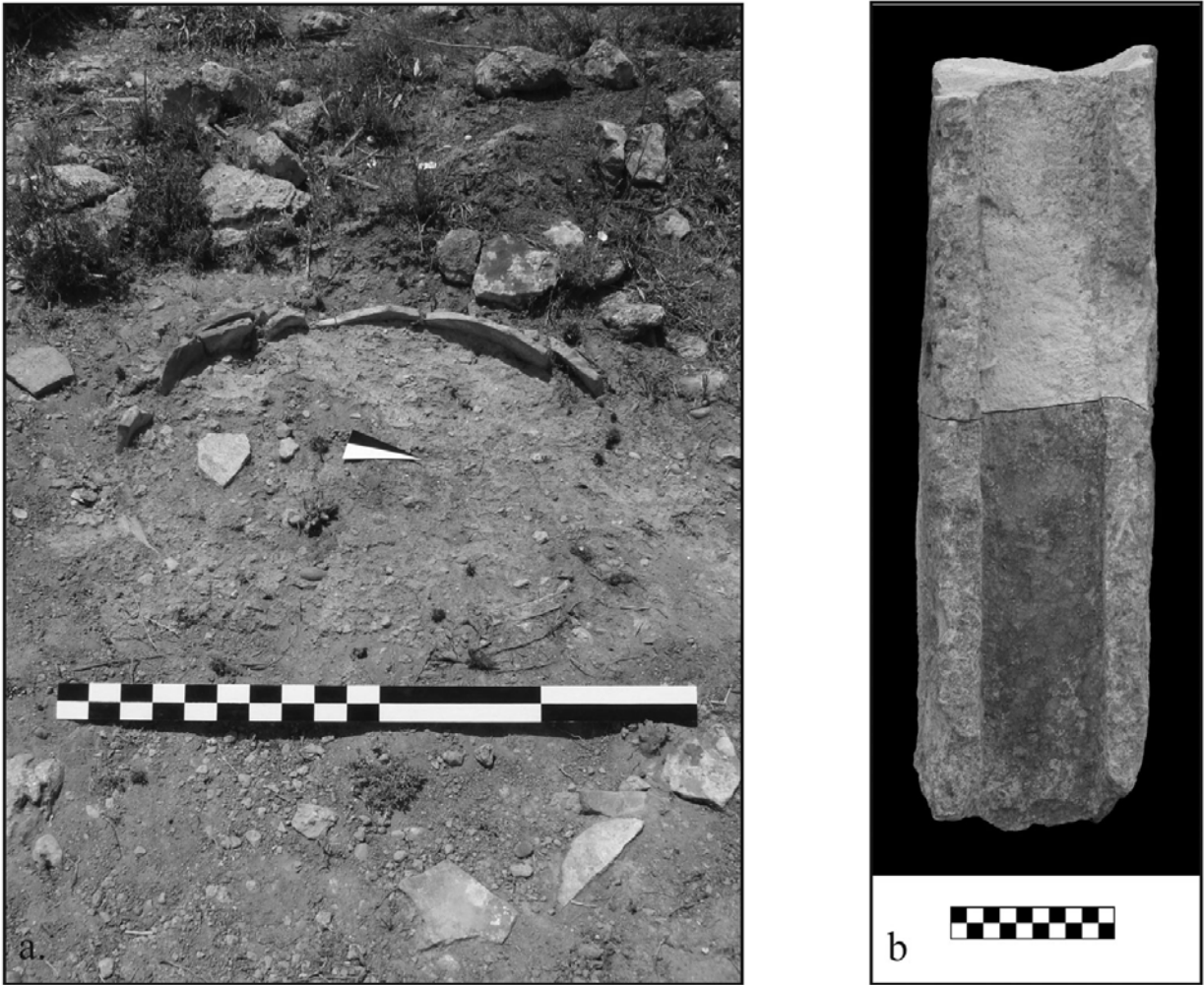
### *b. Kokkinokremos (Brown)*

On Kokkinokremos the principle category of architectural feature mapped, planned and documented were the numerous sections of Late Bronze Age settlement boundary wall that are visible in section along the edge of the plateau. The distribution of these segments, the largest of which is some 15m in length (see fig. 2a & 2b), confirm that this feature was both widespread along the site's perimeter and substantial in character. While no sections of wall were evident along the northern side of the plateau, the highly disturbed nature of deposits in this area would suggest that this observation is likely to be more indicative of formation processes effecting artefactual preservation, rather than a reliable indicator of settlement planning. In the absence of additional information regarding the internal relationship of this feature to architecture inside the settlement itself, we must therefore concur with previous missions in interpreting these sections of wall as component elements of a casemate fortification that encompassed the Late Bronze Age settlement in its entirety (cf. Karageorghis & Demas 1984: 23).

Other additional architectural finds from Kokkinokremos along the southeastern promontory of the plateau included a rectilinear bedrock cut of approximately 1.5 meters in width which appeared to be a foundation trench, and a large pithos found in-situ and abutting the settlement's external boundary. The latter feature may be of particular interest when viewed in association with two examples of limestone 'guttering' found during pedestrian survey. It is tentatively suggested that this combined assemblage may represent the paraphernalia of rain water storage that was first postulated by Dikaeos (1974: 903) in response to the lack of an accessible ground water source within the settlement itself (see fig. 3).



**Fig. 2.** A section of 'fortification' wall along the southwest edge of the plateau. a.) Profile (approx. 15m extent). b.) Plan (scale 1m).



**Fig. 3.** The paraphernalia of water storage? a.) Buried pithos in-situ on southeastern promontory of the plateau; b.) Example of limestone ‘guttering’ collected during pedestrian survey (scale 10cm).

#### **IV. Geophysical Survey and Results (Caraher, Brown, Hunt)**

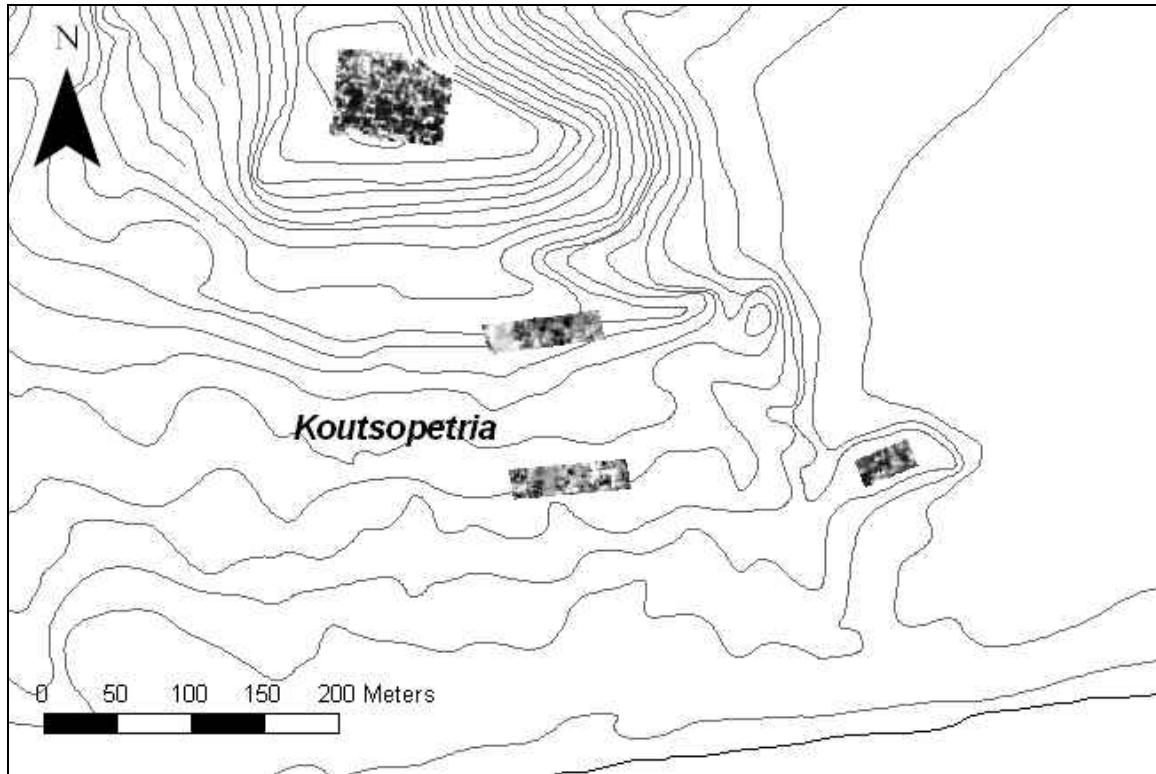
##### *a. Introduction*

During the 2007 field season, PKAP conducted a vigorous campaign of geophysical prospecting. We performed electrical resistivity on over nearly 23,000 sq. m. over the plain at Koutsopetria, and the ridges of Kokkinokremos and Vigla. While we have not completed processing the data at present, we do have complete unprocessed data sets some of which have produced sufficiently distinct results to allow for preliminary analysis.

##### *b. Vigla and Koutsopetria*

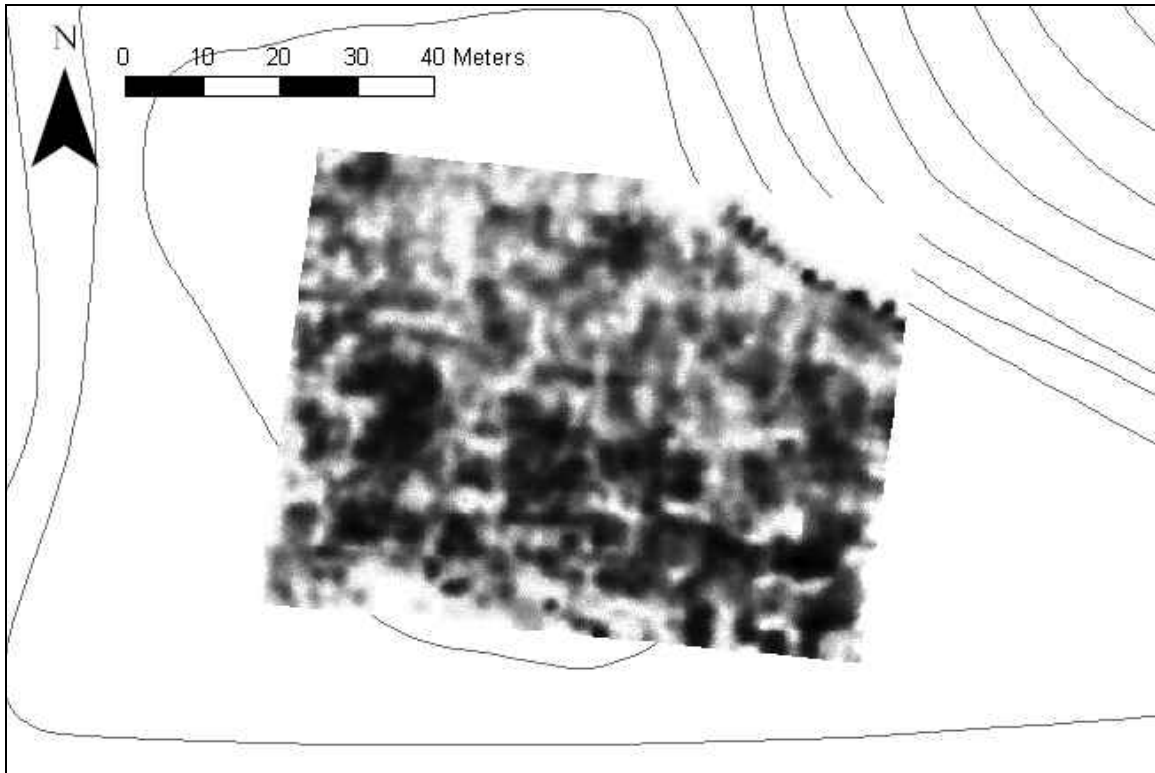
We conducted additional geophysical transects in the area of Koutsopetria and Vigla. The four Koutsopetria transects were, generally, located atop areas of particularly high artifact density or known architectural features. The results were decidedly mixed. Two transects – one situated on a prominent knoll to the west of an ancient wall visible on the surface and the other immediately below the Kokkinokremos ridge adjacent to a unit of particularly high artifact densities – produced no discernable subsurface features. The other two Koutsopetria transects, located in the fields at the base of Vigla, produced more positive results. The transect located atop three of the highest density units from the survey showed a distinct linear feature, perhaps a road, and would reward addition geophysical survey in the

future. The other transect was placed in an area that the local farmer had sought to bring under cultivation in 2006 by deeply ploughing an area of coarse weeds and phrygana. This ploughing exposed a wide range of architectural features including a line of blocks seemingly in situ, a well preserved basin, considerable numbers of Late Roman rooftile and fineware sherds, and several fragments of marble perhaps associated with an Early Christian chancel screen. The resistivity in this area failed to show any recognizable architectural features, but did suggest large quantities of tumble as well as voids.

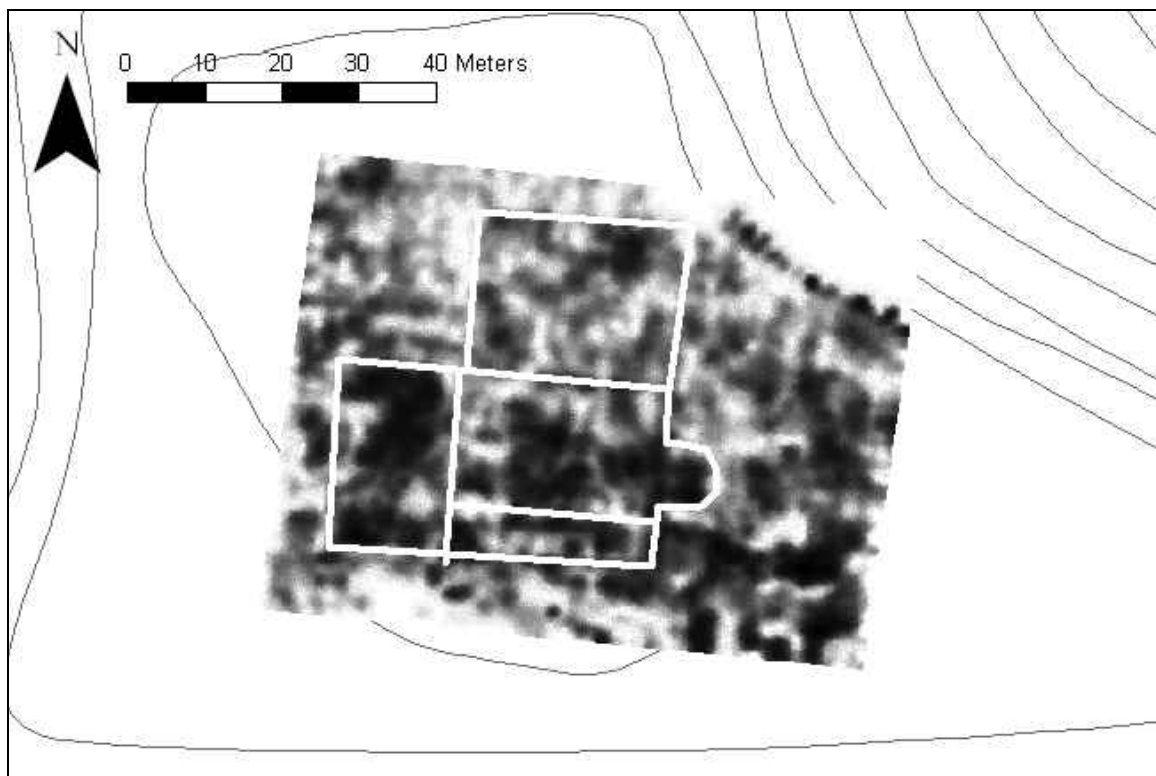


*Koutsopetria Geophysical Work 2007*

The final area subjected to geophysical investigation was the height of Vigla. This prominent coastal height has long been known to produce high quality finds from the Late Classical and Hellenistic Periods including fine wares, inscribed sling pellets, and even inscriptions leading some scholars to assume the presence of a fortification or possibly a sanctuary atop such a significant elevation. We investigated 4800 sq. m. of the ridge using electrical resistivity. The results of this investigation suggest the presence of monumental architecture on the height.



*Geophysical Results from Vigla*



*Vigla Geophysical with Basilica in Outline*

Our preliminary analysis of the results has produced the somewhat surprising conclusion that the monument atop Vigla is an Early Christian basilica with an eastern apse, two clearly demarcated aisles, a western narthex and atrium, and a complex of annexes to the north of the body of the apse. The apse appears to have an interior diameter of around 5 m. which would

make it similar in size to the apse excavated by Dr. Hadjicosti on the plain below. The building is slightly over 25 meters in length (from narthex wall to cord of the apse) and slightly less than 20 meters in width. This marks this building as among the larger class of basilicas on the island; for example, it would be considerably larger than buildings at other rural sites and perhaps best comparable to Ay. Georgios-*Peyias* Basilica I. The ratio of length to width stands at around 1.3-1.5, which is also consistent with other basilicas on the island. While these results are extremely preliminary and should be confirmed by excavation, this discovery in conjunction with work that we will discuss later in our paper suggests a major Late Roman phase for Vigla.

*c. Koutsopetria (M. G. Brown)*

In order to further expand and contextualize our knowledge of this important Late Bronze Age settlement, our work concentrated upon those areas of the plateau not already subjected to more intensive study by means of excavation (cf. Dikaeos 1971; Karageorghis & Demas 1984). While the generally poor state of preservation over the majority of the site precluded us from planning architectural complex in detail, the results did identify numerous features that advance our understanding of the settlement's internal structure, in addition to highlighting numerous pockets of preservation in an otherwise denuded landscape. Perhaps the most surprising discovery was the presence of a large linear feature (of approximately 25 meters in length) located in the heavily eroded north of the plateau, which most likely represents a modification of the bedrock to form a foundation cut for a substantial wall. Given the highly disturbed nature of the stratigraphy in this area due to plough disturbance combined with the shallow nature of the underlying deposits (as indicted by the widespread protrusion of bedrock), it is tentatively suggested that this feature may be the only surviving indication of a once significant structure at this location. In addition, on the south-west promontory of Kokkinokremos we were also able to correlate another linear geophysical feature with an apparent return wall protruding outwards in section from the present day field boundary.

## **V. Museum Work**

*a. Pottery (R. S. Moore)*

During the 2007 season, we nearly completed the preparation of a formal catalogue of significant sherds. This catalogue has two values for the projects: 1) it has produced a publishable artifact catalogue, parts of which will certainly be included in subsequent publications and 2) it allowed us an opportunity to refine our identification of certain artifact classes. This summer, we selected artifacts either that fell within our expertise (i.e. primarily of Late Roman date or of well established chronology or function) or that seemed likely to yield significant refinement of chronology (i.e. primarily the well-understood Late Roman finewares). During the course of the 2007 season we catalogued more than 220 artifacts.

Artifacts selected for formal catalogue descriptions had all been labeled and imaged and approximately half of them have been drawn. We continued using the description system established in 2006 for the cataloguing of artifacts.

***PKAP Catalogued Artifact Recording Form (PKAPCARF)***

Artifact Number:	Label?	Scan?	Photo?	Drawing?
Dimensions:	Munsell:			
Description Fabric:				
Description Shape:				
Description Decoration:				

In general, we used the “Instructions for Inventorying” employed at the American School of Classical Studies Excavations at Corinth, Greece dated to 2005.

**Dimensions:** All dimensions were recorded in meters. A maximum of 3 dimensions were included for each artifacts: 1) h = height; the height of the properly stanced rim; 2) l = length; the maximum preserved length of the rim fragment; 3) est. diam. = estimated diameter; this was only used for rims and estimated from a rim diameter chart with a maximum rim diameter of 24 cm. In some instances the maximum rim diameter for artifacts over 24 cm was estimated in order to convey the proper order of magnitude (e.g. 26 cm or 34 cm). Consequently, all estimated rim diameters over 24 cm should be treated as only rough estimates. For artifacts other than rims or too small to estimate diameter or stance, we simply recorded the maximum artifact dimension.

**Munsell:** For all artifacts, we recorded a Munsell number for the fabric of the artifact. For slipped artifacts we included a Munsell number of the color of the slip.

**Description Fabric:** This was done with the naked eye both inside the museum and in sunlight. The size and coarseness of the grain was estimated and recorded as either fine, medium coarse, or coarse. Any visible inclusions were recorded by color unless they could be easily identified by the naked eye, such as lime, quartz, or mica. The goal of the fabric description is to produce descriptions that are useful to other archaeologists studying artifacts under similar conditions.

**Description Shape:** If the artifact was from a known artifact type (e.g. PHW3), in most instances this was simply noted along with any recognizable subtypes. If the artifact could not be associated with a known type or was significantly anomalous, then a more formal description was included following the guidelines established by the Corinth Excavations.

**Description Decorations:** This field included a brief description of the surface decoration, painting, or the character of the slip.

*b. Plaster and Gypsum (S. Lepinski)*

The small-scale rescue operations by the Department of Antiquities in 1993 and 1999 at Pyla- *Koutsopetria* recovered numerous fragments of painted plaster, molded gypsum stucco and carved stone architectural elements from a building identified as an Early

Christian basilica.<sup>2</sup> The excavations cleared an annex room, Room 1, which is located to the south of the main west-east axis of the basilica and uncovered sections of the central apse of the basilica.

The paintings and architectural elements from the basilica demonstrate that the building was remarkably well-adorned. With the exception of a few surface finds and a number of *crustae* from an opus sectile floor<sup>3</sup>, which were found within the apsidal area, all of the painted plaster and the majority of the decorative architectural elements were recovered from a single room, Room 1. The painted motifs and carved and incised designs preserved on the paintings and architectural elements from this room are relatively common within Late Roman/Early Christian buildings on Cyprus and elsewhere in the Mediterranean. The painted iconography is specifically Christian in nature, however, and shows close affinities with paintings found in funerary contexts in Northern Greece. On the other hand, the molded gypsum and carved stone elements from the basilica at Pyla-Koutsopetria compare well with architectural features from other Early Christian basilicas in Cyprus, such as those at Kopetra, Kourion, and Soloi. The technique of molded Gypsum is prevalent within Cypriot Basilicas and the examples from Pyla-Koutsopetria certainly augment the growing corpus of molded gypsum on Cyprus.

In July 2005 I analyzed the painted plaster from Room 1 and during this current season I completed the study of the decorative architectural elements. The following catalogue is a result of this work and includes the fragments with identifiable and significant graffiti, incised and/or carved motifs and symbols. In addition to a catalogue, close scrutiny of the decorative media from Room 1 reveals that it likely had multiple phases with differing or fluctuating functions from one phase to the next.

The architectural elements belonging to the first phase of Room 1 display that the overall decoration was well-conceived. The room was finished with gypsum stucco architectural features such as large rectangular window panes (perhaps as many as six) with both rosette and scale patterns (Inv. 7/8, 82, 83, 84, 90, 172), vegetal pilaster capitals (Inv. 82), a vegetal frieze (Inv. 43 A), and door jambs (Inv. 12/17, 83). A limestone lintel with carved rosettes (Inv. 85) likely adorned the entrance to the room and an elaborate white and grey marble column capital (Inv. 118), a fragment of a stone column (Inv. 158), and a sandstone cornice fragment (Inv. 93) A second column capital (Inv. 51), a sandstone pilaster capital (Inv. 71), a limestone pilaster capital (Inv. 89), fragments of carved stone windows (Inv. 162, 163), and two fragments of an elaborate sandstone, and perhaps much later, lintel/cornice (Inv. 159l, 160) were found on the surface and may be associated with the initial architectural phases of the building, although this cannot be stated unequivocally at this time.

In the second identifiable phase of Room 1 the gypsum plaster windows were plastered over with thick (00.006 m.) mortar, but left in situ (in many cases the new face of plaster was incised with lines and/or graffiti). The plaster applied to the faces of the windows is very similar (if not identical) to the plaster that preserves the painted motifs (most generally Type 1 but also 2- see beginning of catalogue for description of plaster types). The painted motifs include a large flanged cross that is believed to have originally decorated the central pier of the room (Inv. 97), as well as other painted crosses (Inv. 99), an inscription (Inv. 98), stylized vegetal motifs (Inv. 95, 96, 102,103) and radiating circular symbols (Inv.104) and fit well among visual comparanda found in funerary contexts throughout the

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<sup>2</sup> Hadjisavvas, S. 2000. "Pyla-Koutsopetria. Chronique des fouilles et découvertes archéologiques à Chyre en 1999." *BCH* 124:692-693; Christou, D. 1994. "Pyla-Koutsopetria. Chronique des fouilles et découvertes archéologiques à Chyre en 1999." *BCH* 118: 689-691.

<sup>3</sup>The *crustae* and roof tiles from the excavations are being studied by Dr. Phryni Hadjichristophi from the Cyprus Museum.

Late Antique Mediterranean. Their application within Room 1 may indicate that in this second phase Room 1 was sanctified for burials.

The well-documented excavation of these fragments and their preservation provide an opportunity to study multiple decorative media alongside one another, with the intent to understand the interrelationships between the media, technically and visually. Further study will elucidate the relationship(s) – both temporally and materially-- between the decorative media in Room 1 and continued research into the comparanda for the painted motifs and carved/incised designs with advance questions regarding the function of the room during its distinct phases and the significance of the painted motifs and incised symbols.

c. *Glass (K. Pettegrew)*

In 2007, we made a preliminary analysis of the glass collected at *Koutsopetria* in the 2003-2005 survey. Previously we had separated out the glass and photographed each piece. This season, I grouped together the following categories: modern glass, ancient colored rims and bases, colorless fragments, feature fragments, and colored body fragments. I began to catalogue the fragments, measuring each (average thickness, maximum preserved dimension, and diameter where possible) and describing them in a preliminary way, including description of color and fabric. In total, 46 fragments were catalogued, which constitute all the glass except for modern pieces. During the off-season, I plan to take these preliminary descriptions and find comparanda for the pieces and complete the descriptions using standard conventions for glass.

d. *Photography (G. Fisher)*

As in the previous two seasons, Greg Fisher, Oxford University, was responsible for artifact photography. A photography log containing the unique artifact number, provided a complementary record of imaged artifacts to that of the scanning log, so that a complete list of imaged, ie: catalogued, artifacts could be determined at the end of the season.

Artefacts (glass, ceramic) are photographed using a tripod, digital camera, and a piece of wood covered with a matte cloth clipped to each side with bulldog clips. The photo area is formed between the Kodak color scale and the cm scale to the top and bottom. The artefact is photographed with its tag number from which ever angles are required: e.g. the artifact may be photographed flat, in cross section, etc. The macro setting may be used on the digital camera. No flash should be used. The artefacts are photographed outside in the shade and it is prudent to stop up or down as required to ensure that the color on both artefact and colour scale are vivid. The camera should be at whatever distance above the cloth is required to adequately frame the subject matter.

e. *Drawing (M. Dalton)*

Finds illustration has constituted an important part of the *Pyla-Koutsopetria* Archaeological Project's 2007 season, with the complete drafting of over 200 artifacts of a wide range of types and forms collected in recent years. After cataloguing a selection for drawing by Dr R. Scott Moore, finds were drafted using a modified version of John Hayes' standard illustrative conventions, which allows for vessel thickness, reconstructed original diameter, sherd orientation and form to be immediately assessed by the viewer. All illustrations, both the majority produced this season and the 60 drafts from previous years, received careful inspection and cross-referencing against the original artifact before inking and final approval for publication.

Responsibility additionally fell upon myself to produce detailed scale plans of a number of extant architectural features which are visible on the surface within the project's study area, and particularly on the plateau of *Pyla-Vigla*. Plans are particularly useful in the

understanding of these complex, eroded, and physically widespread architectural units, and allow conclusions to be drawn as to original nature of the features in a way that is impossible through the medium of oblique photography alone.

Through the graphical elucidation of the ceramic forms and architecture present in PKAP's area of study, the drafting work carried out over the course of the 2007 season will form an important constituent component of the project's final publication, and will contribute towards the shedding of light on the site and its place within a greater historical context.

## VI. Miscellaneous

### a. *Sling Pellets (B. Olson)*

After receiving permission from Dr. Maria Hadjicosti, I went to the Cyprus Museum to inspect the inscribed leaden sling-bullets recovered from Vigla. The purpose of this visit was two-fold, illustration and provenience. Dr. Ino Nicolaou undertook the arduous task of measuring, translating, and photographing most of these bullets in a series of *RDAC* articles in the 1970's but he did not include any illustrations.<sup>4</sup> Nicolaou's photographs, however, do not offer a clear depiction of the inscriptions. Proper illustrations are greatly needed to study this material in detail.

During the late 1960's Nicolaou published a different set of inscribed lead sling-bullets from Cyprus, museum inventory numbers M.2999/1-29.<sup>5</sup> Although Nicolaou also measured, translated, and photographed this material, he did not offer any provenience information. Therefore, the two research objectives for the Cyprus Museum were to illustrate one representative sling-bullet inscription for each form and determine whether any of the material published in Nicolaou's 1969/1970 article came from Vigla.

On Monday, June 11<sup>th</sup> I inspected some of the sling-bullets recovered from Vigla in 1976, museum numbers 1976/V-31/11(i-xiv). From this batch I illustrated bullets xiii and xiv but spent the majority of my morning with Dr. Hadjicosti checking inventory numbers in the museum's acquisition log. It turns out that the M.2999 sling-bullets are part of the "old collection." The Department of Antiquities catalogued the material from this collection in 1935 with as much information available. The provenience of the inscribed sling-bullets, however, is not known. When the museum closed at 1:00 I went to the Cyprus American Archaeological Research Institute (CARRI) to look for *comperanda* to the Vigla sling-bullet assemblage.

On the following day I completed illustrating the sling-bullets from the 1976/V-31/11 batch (xii, ix, i, iii, v, and viii) and returned to CAARI to continue to search for *comperanda*. June 13<sup>th</sup> was the final day in the museum and I finished illustrating the Vigla bullets. I examined batches 1976/III-12/1(a-c), 1976/VI-29/3(i-iv), 1976/XI-9/30-36, 1978/XI-20/1-2, and 1979/II-5/1(a-j). I drew bullets 1976/III-12/1(a), 1976/VI-29/3(i), 1976/XI-9/32 and 34, 1978/XI-20/2, 1979/II-5/1(d, g, h, and j). These 17 illustrations will allow me compare the inscriptions and forms on Vigla to other sites with similar material in Cyprus and the greater Mediterranean.

At this early stage of research I am unable to say whether the inscriptions on these sling-bullets are specific names or proper nouns, which would produce different conclusions. Several bullets with a few proper names may suggest a specific military conflict, as David

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<sup>4</sup> *RDAC* 1977; 1979; and 1980.

<sup>5</sup> Ino Michaelidou-Nicolaou, "Ghiande Missili di Cipro," *Annuario della Scuola Archeologica di Atene* 47/ 48 (1969-1970): 359-369.

Robinson has argued.<sup>6</sup> If the Vigla inscriptions are proper nouns, one may construe these finds as votive in nature. For example, the most common attested inscription on the Vigla bullets is ΦΙΑΕΤΑΙΡΟΥ, which is present on almost half of the assemblage (15 out of 35). ΦΙΑΕΤΑΙΡΟΥ can either be a specific name or a proper noun meaning “loyal to or fond of a one’s comrades.” In the next few months I intend to continue this research and attempt to answer some larger, albeit intertwined, questions such as: 1) Why is there such a large amount of inscribed sling-bullets on Vigla? (Local production, Military engagement, Votive space); 2) Do the sling-bullets from Vigla conform to any pattern from other Cypriot and Mediterranean sites of the same period?; 3) How did these sling-bullets function?; 4) Why would someone inscribe a sling-bullet?; and 4) Who inscribed the bullets?

b. *Aerial Photographs (M. G. Brown)*

In order to further contextualize our surface collection data within its landscape context, aerial photography was taken of the principle survey areas on Kokkinokremos, Koutsopetria, Vigla and the adjacent northern plain. Preliminary analysis of this data has identified numerous features that were not apparent from ground inspection alone. The most striking example is a pair of parallel bedrock cuts arranged some 20 meters apart that form a dry moat along the northern side of the Vigla ridge (see fig. 4). Through the adoption of this integrative survey approach that combines both remote sensing and surface survey, we have also been able to detect off-site activity in the form of quarries and relic field systems. In addition, a GIS based review of earlier aerial images taken in 1963 allowed for the relocation of Dikaios’s northern Area 1 trench excavated in 1952 and which is now completely eroded. The new aerial photography was kindly undertaken on behalf of PKAP by 84 Sqd. RAF Akrotiri to whom we would like to express our sincere thanks.



Figure 4. Aerial photography of Vigla (dry moat and adjacent wall upper left).

<sup>6</sup> David Robinson, *Excavations at Olynthus X: Metal and Minor Miscellaneous Finds* (Baltimore: John Hopkins University, 1941): 418-443.

## VII. Problems and Priorities

### *a. Introduction*

The 2007 season was overwhelmingly successful. The PKAP team managed to complete most of the most important tasks necessary to move the project from the study to publication. We will have a completed copy of our artifact catalogues, basic discussions of our method, and a preliminary draft of the analysis of our survey completed by mid 2008. Despite this progress, there are several additional steps necessary both at the museum and in the field that will ensure that our final publication is a high-quality work with sophisticated and significant conclusions.

### *b. Survey*

The continuous spread of pottery to the north of the Vigla on the coastal ridge was among the more surprising results of the 2007 field season. Extensive survey of these ridges in previous seasons did not reveal the extent or the density of artifacts discovered in these fields. The late harvest date of the barley crop that covers these fields and the relatively short field season prevented us from exploring the entire extent of these coastal ridges. Continuing our survey units to the north and west of the site should remain a priority for future field seasons.

In addition to the intensive survey, we have become increasingly aware of the need to perform extensive survey of the fields to the west of the S.B.A. area extending toward Larnaka parallel to the coast. This territory is becoming rapidly developed and the fragile surface record is at risk of being destroyed. The wealth and density of material at our site has made it particularly important to determine its relationship with the urban center of Roman Kition some 10 km to the west. If high density settlement continues to the west along the coast, then our site may represent a wealthy, if somewhat distant suburb of the city. If artifact density declines, then this suggests that our site represents an ex-urban agglomeration perhaps more politically, economically, and culturally autonomous from Kition.

Finally, over the course of the 2006 and 2007 field seasons we have identified several areas in the Vigla and Kokkinokremos ridgeline. These features require complete documentation, photography, and in some cases illustration.

### *c. Mapping*

Alongside our survey work, there is a need to prepare accurate high-resolution topographic maps (1 m elevation) of the Vigla and Kokkinokremos ridges. These maps will ideally be prepared with the use of a high-resolution Trimble R-8 differential GPS unit. These high-resolution maps will become the base maps for all future archaeological work in the area.

### *d. Geophysical*

The geophysical results from the two transects in Koutsopetria, immediately to the south of Vigla, produced somewhat unsatisfactory results. While both samples reveal rubble and collapse suggestive of large-scale architecture, neither transect produced enough material sufficient for more complex analysis. The success of our geophysical work on Vigla and Kokkinokremos reinforces the suitability of this method for the conditions in the survey area. Consequently, it would seem prudent and productive to expand the area examined by geophysical prospecting in Koutsopetria. It is the hope that this work will provide information regarding its internal organization, discrete functional zones, and overall complexity of the site.

*e. Excavation*

In addition to geophysical prospecting and additional survey, limited excavation would serve as a vital check on the work done in previous seasons. The likely Early Christian basilica on Vigla and the new features on Kokkinokremos both require ground-truthing before the results of the geophysical work can be treated with confidence. At present, it would be possible to check the geophysical results with as few as four soundings: two on Vigla and two on Kokkinokremos. The two sounding on Vigla would secure our identification of the apse and perhaps a wall of the narthex. The soundings on Kokkinokremos would expand our understanding of the geophysical results in proximity to a newly documented stretch of the fortified site's west wall and along the line of an apparent bedrock cut. Neither sounding need be larger than

*f. Catalogue Work*

The artifact catalogue for the survey conducted over the course of the 2004 and 2005 field seasons is now substantially complete. The catalogue entries will be keyed and regularized in the off-season and there will undoubtedly arise little inconsistencies or questions that need to be checked against the material at the museum.