

## Research Reports from Cyprus

### **Arediou-Vouppes (Lithosouros) Excavation Project**

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The third season of fieldwork at *Arediou Vouppes (Lithosouros)* was completed in July–August 2006. The site was originally named from the 1923 cadastral map (see Michael Given and A. Bernard Knapp, *The Sydney Cyprus Survey Project: Social Approaches to Regional Archaeological Survey*, pp. 179–82. Cotsen Institute of Archaeology at UCLA, 2003). However, *Vouppes* refers to the field systems in the bed of the Alouppos river valley to the east of the site; the local name for the fields in which the site is located is *Lithosouros*, meaning mound of stones. Although it would be preferable to use the local nomenclature, given the number of publications that already refer to *Arediou-Vouppes* and material housed in the Cyprus Museum, Nicosia, under this name we have decided to continue with the name given to the site by SCSP.

The site has been identified as an agricultural support village, implying centralized control of farming and produce in the Cypriot hinterland during the Late Bronze Age. The CBRL has funded a pilot study of the site, to determine its suitability for a large-scale project. The purpose of fieldwork was to investigate the nature of inland settlement in Late Bronze Age Cyprus and to define the material characteristics of inland settlement. Specifically, we are examining the economic basis (agricultural, pastoral, involvement in copper procurement and production) and the site's integration in inter- and intra-island economic networks.

Previous research at the site, in 2004, had indicated that *Vouppes* is much larger than the 2 ha originally identified by the Sydney Cyprus Survey Project. Consequently, in 2006 we surveyed the fields immediately north of the area identified by SCSP. Finds here included significant quantities of Late Bronze Age pottery and some groundstone tools, including a fine example of a small pestle. Amongst the ample Late Bronze Age material recovered was the false neck and handle of a Late Minoan III stirrup jar. These stirrup jars were used in large-scale commodity trade in olive oil from post-palatial Crete. The example from *Arediou* illustrates the extent to which the community at *Arediou* was able to access imported commodities. Of particular interest is a sign inscribed on the handle, which relates either to the Cypro-Minoan or the Linear B script. This indication of familiarity with one or both writing systems might represent the first clear evidence of literacy at *Vouppes*. The results of the 2006 surface collection clearly demonstrate that the site extends for at least an additional 30 m to the north. Local knowledge indicates that this is still not the full extent of the distribution of Late Bronze Age materials. Together with the results of the 2004 survey, the geophysics, and discussion with the farmers who work the field, it is now clear that the main part of the site lies in Field 4 and the fields immediately to the north. A building with a row of pithoi had been uncovered during the construction of the agricultural buildings in this area; which were subsequently excavated by the Department of Antiquities. Test trenches in 2005 had confirmed the presence of significant architectural remains in Fields 3 and 5, corresponding to subsurface anomalies identified in the geophysical survey of 2004 and distinctive scatters of surface materials. These remains represent the southern limits of the settlement.

The main focus of fieldwork in 2006 was the exploration of a significant structure (Building 1) in Field 3 identified in 2005, with the aim of uncovering its architectural footprint. A large trench (1069/998) measuring 12x12 m was opened to expose the two trenches opened in Field 3 in 2005. The results of excavation have enabled us to refine our interpretation of the building's architecture and use. At present, this does not appear to fit within the range of known Late Bronze Age buildings on Cyprus in terms of its architectural layout and some of the architectural practices. We uncovered a large external wall, measuring 0.5 m thick. This was constructed using large diabase pebbles from the river bed and other intrusive volcanic rocks, the source of which has not yet been identified. Along the inside wall, there was the base of a wide structure, which we interpreted as a stone-built bench. The main entrance into the building was marked by a white stone threshold, which had been identified in 2005. A series of small stone piers jutted out from the wall of the building; together with a stone column base, we have interpreted these as supports for an external covered area, analogous to a colonnaded porch. This was south facing and would have provided a shady area for activities during the summer and a warm, sheltered area in which to work during the winter months. The external surface appears to comprise a tamped mud floor; this was extremely fragile and did not survive beyond the presumed covered area of the porch. A range of semi-restorable utilitarian wares were found *in situ* on this surface in 2005 and 2006, together with an upturned, well worn quern immediately by the doorway. A very large stone pestle was found mixed in with the rubble collapse from the wall. Inside the building, the floor surface was simply cut into the sedimentary natural; in places this had been patched with a basic mud mortar.

In 2005, we found small quantities of copper slag immediately outside the doorway, and a small copper/copper alloy point. More slag (weighing c. 8kg) was excavated just north of the external wall, together with a copper/copper alloy spiral ring. This metallurgical debris was found in what appears to be the southern limits of a large courtyard. It was directly associated with a small pebble surface and a series of flat sedimentary stones set



(a)



(c)



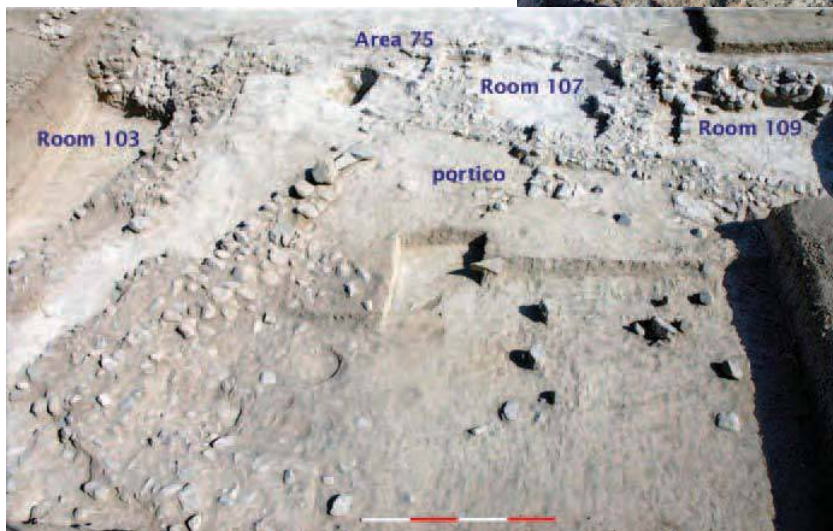
(d)



(b)



(e)



(f)

- (a) Stone pestle found in field survey
- (b) Minoan stirrup jar handle with inscribed Cypro-Minoan sign
- (c) Plain Ware jug in situ on floor of Building 1
- (d) Bronze point found in work area in Building 1
- (e) Work room 109 with finds in situ on floor
- (f) Aerial view over Building 1



*Hammerstone found in work room 109 in Building 1*



*Excavating room 103, Building 1*

in a circular pattern, comprising an apparent work area (Area 75). The flat stones were intrusive to the site; a local historian working in the village indicated that these came from a locality several kilometres away. These had clearly been selected by the community at *Vouppes* for certain specific properties deemed necessary within the work area, thereby underlining the effort that had been expended in the construction of the facilities at *Vouppes*. The courtyard, which was cut into the natural sedimentary rock, continued right up to the northern baulk of the trench, which lies immediately south of the field boundary/retaining wall between Fields 3 and 4. Very few finds survived on the courtyard floor, no doubt due to the shallow depth of deposit beneath the modern surface. Nonetheless, a small polished stone pestle and the upper body of a Plain Ware jug were found *in situ*. The latter is awaiting conservation. This area has been interpreted as a large open courtyard, which was used for a number of activities that still need to be defined. The courtyard appears to run into Field 4; here better preservation might be expected given the greater depth of deposit immediately behind the field boundary.

Immediately to the east of Area 75, we excavated two rooms (107 and 109). Here we uncovered two robbed out stone benches and a scatter of artefacts *in situ* on the floor. These included restorable Plain ware basins (awaiting restoration), a small wide necked pithos, various stone weights and pestles, a rubber/polisher and a circular stone hammer (see Fig. 17 in Stuart Swiny (ed.) *The Kent State University Expedition to Episkopi Phaneromeni 2*. Nicosia: Paul Åström, 1986). The restorable Plain ware basins are unique within a Late Bronze Age context — usually these survive in a very fragmented condition, consequently the several examples from *Vouppes* should help elucidate how these vessels were originally used. As with the other restorable pottery from the site, these are currently awaiting restoration. The total range of artefacts indicate that these were work rooms. The trench was extended 1.5 m east to define the limits of the eastern room, 109; however, the building clearly was continuing further to the east and excavation could not be completed. The nature of activities conducted in these rooms, and their relationship to the activities carried out in the nearby work area remain elusive.

In 2005, we had identified walled stones in a cut in the natural in 1070/1005, belonging to the lowest course of a collapsed wall. Originally, it was unclear whether this wall could be related to the main structure in 1073.5/1000. The open area excavation in 2006 clearly demonstrated that this wall belonged to the western part of Building 1

(as extant). It comprised a substantial north wall of a sunken room (room 103) c. 2m deep, cut into the natural. The finds from this room included various LC IIC wares, an inscribed Canaanite Jar handle, imported Mycenaean pottery and several wall bracket fragments. There was also a fragment of a painted Base Ring bull. Associated with the pottery immediately overlying the floor there was some charcoal. The complete extent of room 103 was not uncovered; however, it does appear to be extending to the NW towards the boundary between Fields 1 and 3.

The southern limits of Building 1 have not been identified; however, the proximity of the extant walls in the SW part of the building as uncovered to an earlier field boundary in Field 3 (shown on the 1923 cadastral) and the boundary between Field 3 and the heavily terraced Field 1 suggest that this part of the architecture has been destroyed by later farming activity. This is further substantiated by the shallow depth of deposit in this part of the site. Instead, it seems probable that well preserved archaeological remains are only going to be found to the east and north, extending into Field 4. This is further substantiated by the distribution of surface finds, which to date have correlated very well with the extant archaeology.

The excavations in 2006 have clearly indicated that *Vouppes* is an important Late Bronze Age site, which merits further investigation. The architectural remains are unique in terms of the range of Late Bronze Age buildings known to date. It is evident that Building 1 housed a range of specialist, non-domestic activities. The pestles, massive saddle querns, weights and utilitarian wares (basins, pithoi, jugs, Canaanite jars) indicate large-scale processing activities, possibly of agricultural materials. The quantities of slag are insufficient to illustrate large-scale copper production, but they demonstrate unmistakably some form of communication with the nearby mining sites. The consistent occurrence of imported wares (Egyptian amphorae, a Syrian platter bowl, Mycenaean pottery and the Minoan stirrup jar) illustrate that the inhabitants at *Vouppes* were in contact with the coastal trading communities and had access to luxury commodities.

Other areas of the site were explored, funded by a private body. The architectural footprint of a large structure (Building 2) was uncovered in Field 4, including a well 5m deep. The tomb identified in 2005 was excavated. This had been extensively looted during the Iron Age, but the remains of several burials were identified on the floor, including a warrior burial of the sixteenth century BC. This not only confirms the distribution of surface remains from the survey, which indicated LC I activity in this part of the site, but moreover places *Vouppes* alongside a number of wealthy warrior tombs of this date in the Tamassos-Politiko region. These excavations have reiterated the importance of *Vouppes*, not just as a single period site, but one which elucidates many aspects of Late Bronze Age society on Cyprus. For further information on these excavations, please see:  
[http://www.lamp.ac.uk/riaha/research\\_projects/bronze\\_age\\_in\\_cyprus.html](http://www.lamp.ac.uk/riaha/research_projects/bronze_age_in_cyprus.html) and:  
<http://www.lamp.ac.uk/archanth/staff/louise/arediou-vouppes.htm>

### **Pyla Geophysical Survey and Aerial Photography**

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In the spring of 2007, as a compliment to ongoing surface investigations by the Pyla Koutsopetria Archaeological Project (PKAP), I directed a two month program of geophysical survey and aerial photography in the Dhekelia region of south-east Cyprus. The results of this collaboration will form the basis of my PhD research into changing settlement patterns in Larnaca Bay during the Late Bronze Age.

The geophysical work focused on the three principle areas of the Pyla littoral region, and saw the completion of over 20,000 m<sup>2</sup> of electrical resistance survey at the sites of Pyla-Koutsopetria, Pyla-Vigla and Pyla-Kokkinokremos. With regard to the latter, and in order to expand our knowledge of this important Late Bronze Age maritime emporium, we concentrated upon those areas of the plateau that have not already been subjected to more intensive study by means of excavation. While the generally poor state of preservation over the majority of the site precluded us from planning architectural complexes in detail, the results did identify numerous features that advance our understanding of the settlement's internal structure, as well as highlighting numerous pockets of preservation in an otherwise denuded landscape. Perhaps the most surprising discovery was the presence of a large linear feature (of c. 25 m in length), located in the heavily eroded north of the plateau. This most likely represents a foundation cut for a substantial wall. Given the highly disturbed stratigraphy in this area due to plough-smear, combined with the shallow nature of the underlying deposits (as indicted by the widespread protrusion of bedrock), it is suggested that this may be the only surviving remnant of a once significant structure.

On the south-west promontory of *Kokkinokremos*, it was possible to correlate another linear geophysical feature with an apparent return wall protruding outwards in section from the present-day field boundary. An accompanying surface survey of the plateau carried out under the auspices of PKAP (the results of which are to be analyzed in 2008), also brought to light numerous examples of stone artifacts not previously recorded at the site.



*Pyla-Kokkinokremos  
from the air, June  
2007*

The *Koutsopetria* geophysical transects were located atop areas of particularly high artefact density that were established during the course of the PKAP pedestrian survey. The geophysical results from this locality showed evidence for several interconnected and parallel linear features, which are most plausibly identified as an orthogonal Roman road system.

At *Vigla*, an area of approximately 4,600 m<sup>2</sup> of the ridge was surveyed, with the results indicating the presence of monumental architecture located in the centre of this prominent coastal height. Preliminary analysis of the data suggests that the building is an Early Christian basilica, accompanied by a complex of annexes situated to the north of the principal rectilinear structure. While these results require further interpretation, this discovery in conjunction with other upstanding architectural features identified on *Vigla* during the course of the PKAP pedestrian survey, all collectively suggest a major Late Roman occupation.

In order to further contextualize the geophysical data within its landscape context, aerial photography was undertaken of the principle survey areas on *Kokkinokremos*, *Koutsopetria*, *Vigla* and the adjacent northern plain. Analysis of these images 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. In addition, a GIS based review of aerial images taken in 1963 allowed for the relocation of Dikaios's northern Area 1 trench on *Kokkinokremos* that was excavated in 1952 and which is now completely eroded.

Through the combined application of remote sensing techniques and geophysical survey, as a compliment to the ongoing PKAP pedestrian collection, it has been possible to gain a better understanding of the nature and extent of Late Bronze Age and Late Roman settlement within the Pyla region. It is hoped to return in 2008 in order to continue with additional geophysical investigations along the coastal plain.

For more information on the Pyla Koutsopetria Archaeological Project visit: [www.chss.iup.edu/pkap](http://www.chss.iup.edu/pkap)

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