

KENTRO

The Newsletter of the INSTAP Study Center for East Crete

Volume 7 (Fall 2004)



MESSAGE FROM THE DIRECTOR

Work at the Study Center this past year was noteworthy on many levels, but the most important development was our ability to meet the increasing, yet different, demands of summer and winter research on space, equipment, and personnel. I want to highlight just a selection of these activities here.

From September to May, the Study Center and its conservators hosted three projects and several individual scholars. The projects included Metaxia Tsiropoulou's study of the pottery from Petras House 1, which included this excellent illustration of a LM IA kitchen. Tina McGeorge continued her detailed examination of the human remains from Hagios Charalambos, and Yiannis Papadatos worked on the remarkable Final Neolithic to Early Minoan I finds from the site of Kephala Petras (Hatziyiannis plot), near Siteia. Marie Goodwin studied Minoan kernoi, and Andrew Koh collected samples for residue analysis of several Late Minoan pots. Antonia Stamos examined Pseiran stone vases, while Melissa Eaby investigated Iron Age burial practices. Both Antonia and Melissa received Fulbright scholarships for their research.

Senior scholars also were well represented, including Barbara Hayden, who is executing a geological and geophysical project in the Vrokastro region, and Gerry Gesell, who is readying the Late Minoan IIIC shrine at Kavousi for publication. Sevi Triantaphyllou used the Center's facilities for her study of the human remains from the Late Minoan III cemetery at Mochlos. Finally, we were happy to host Yiannis Bassiakos of the Demokritos Laboratory in Athens, who coordinated metallurgical analyses for several Study Center projects.

The summer is the busiest and most exciting period at the Study Center, and this year was no different. In addition to the

teams excavating at Azoria and Mochlos and the continuing study of the finds from Hagios Charalambos, several individual scholars were in residence. Maria Liston began a study of the human remains from Hellenistic cemeteries in Hagios Nikolaos,

Harriet Blitzler examined material from the Gournia Survey, and Natalia Poulou continued her work on Byzantine pottery from Pseira.

Over the same period, our staff conducted several projects. In the computer lab, Eleanor Huffman produced new informational signs for the sites at Mochlos, Vrokastro, and Gournia. She also completed several translations for the new displays being installed in the Hagios Nikolaos Museum by our colleagues in the 24th Ephoreia of Prehistoric and Classical Antiquities. Under Eleni Nodarou's direction, the W. A. McDonald Petrography Laboratory plotted a productive course with projects from Petras, Mochlos, Chrysokamino, Kato Symi, and Gournes. In addition, our conservators supervised a training program for the conservation of bone and ceramics funded by the European Community.

Finally, I would like to thank our speakers for their participation in our summer lecture series. On June 4th, Yiannis Papadatos of the Greek Open University presented his paper titled "The Neolithic-Early Bronze Age Transition: New Evidence from the Excavation at Kephala Petras, Siteia." On July 23rd, Martin Schmid of the French School at Athens gave a paper titled "Evidence of New Architectural Features and Interpretations in Quartier Mu, the Crypt, and the Palace at Malia." The summer lecture series provides an opportunity for all of us to get together and discuss our work. We look forward to seeing you all again next year.

Thomas Brogan



Tina McGeorge directs the study of human remains from Hagios Charalambos.

THE 2004 GREEK-AMERICAN EXCAVATIONS AT MOCHLOS

by Jeffrey S. Soles

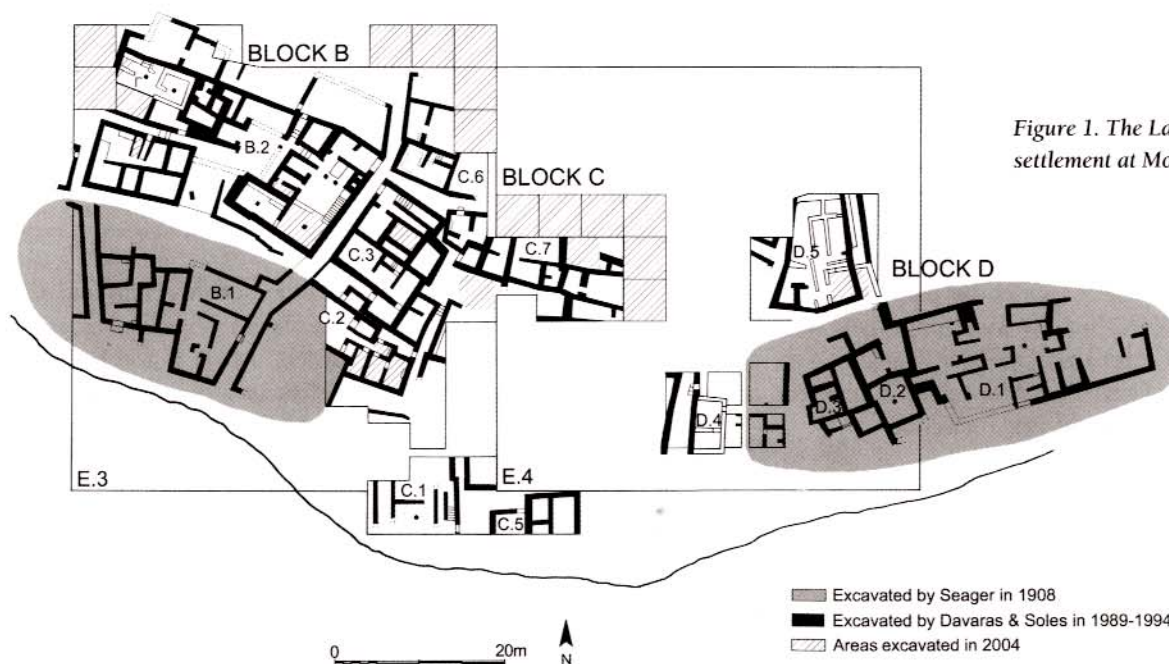


Figure 1. The Late Minoan settlement at Mochlos.

The Greek-American excavations at Mochlos began fifteen years ago, in the summer of 1989, under the direction of Costis Davaras and myself. Our original aim was simply to uncover more of the Late Minoan IB (LM IB) settlement that Richard Seager had discovered in 1908 on the island of Mochlos and on the adjacent coastal plain. Seager uncovered four blocks of LM I houses on the island—about six or seven houses in all—located in Blocks A, B, C, and D (Fig. 1). We continued working in these blocks and exposed parts of eight additional houses, as well as a large ashlar building that formed the town's ceremonial center in the LM IB period. Somewhat unexpectedly, we also uncovered eleven houses of the LM III period that sat on top of these LM IB Minoan houses. On the opposite coast, we excavated an artisans' quarter and a farmhouse that belonged to the LM IB settlement, as well as a number of chamber tombs that belonged to the LM III settlement.

In 1994, we paused in our excavation efforts to study and publish what we had found. In 2003, we published the first Mochlos volumes on the artisans' quarter and farmhouse and also completed the manuscript for the LM III volumes. It seemed like a good time, therefore, to return to the island and finish our excavations so that we could complete future publications. The current excavation is very much a continuation of

the earlier work and has two main goals. One is to complete the excavation of buildings that were excavated incompletely in the 1989-1994 seasons, and the other is to dig as far as bedrock in all parts of the Bronze Age settlement, in order to document the sequence of occupation on the site more fully and expose as much of the Prepalatial settlement as possible. We made considerable progress toward these goals in the summer of 2004 and also made some sensational discoveries.

Building B.2

One of the buildings whose excavation we needed to complete was the ceremonial center, Building B.2. In previous seasons, we had not fully uncovered its west facade or dug through all of its floor deposits. A LM III house, House Gamma, sat on top of its northwest side. We thought we had completed the excavation of this house, but to our surprise, as we dug along the west side of B.2, we found that House Gamma crossed the old Minoan street that ran along this side of the building and extended farther to the west and south. It caused considerable damage to Building B.2, and we may never understand fully how the old Minoan building looked in this area.

We also dug in the southwest wing of Building B.2, and here we made the most exciting discovery of the summer. Digging in

a storeroom opposite the room where six large bronze basins were found in 1994, we uncovered three pithoi that had been buried beneath the floor level, probably to keep their contents cool. Only the rims and shoulders of the pithoi rose above the floor. A LM IB jug lay inside the innermost pithos, which had been filled with rocks. A tin ingot and a bronze trident that was placed over one corner of the ingot were found beneath this pithos at the bottom of the pit (Fig. 2). The ingot had been largely transformed into a powdery, non-metallic tin (gray tin) by a complex change in its crystalline structure, and it was only recognized as tin after testing by Laser Induced Breakdown Spectrometry (LIBS) at the Study Center. The same conversion also would have rendered the ingot shapeless, had it not been surrounded by the earth that was used to rebury the pithoi above it. After the removal of the tin, a plaster cast was made of this pocket, reproducing the original shape of the ingot. With two straight sides joining at a right angle and an irregular line opposite, it bears a remarkable resemblance to a tin ingot found on the Uluburun shipwreck. The trident also resembles one from the Uluburun ship, but unlike that trident (which was used for fishing), the Mochlos trident was intact and served as a symbol of power. Both trident and tin ingot probably came to Mochlos from a ship that sailed from the Syrian coast and made its way to Crete without mishap some 200 years before the Uluburun wreck. Both objects are the first of their kind in Crete.

We also continued excavating the floor deposit in the south-east pillar crypt of the ceremonial building. In previous seasons, we had found only pithoi and conical cups here. We continued to find many more conical cups, but also a whole, intact oxhide ingot. It lay on the floor directly beneath the window in the east facade of the pillar crypt and must have been illuminated by the window and visible to the passersby on the street outside (Fig. 3). For some reason, a conical cup was placed upside down on



Figure 2. Tin ingot and bronze trident in Building B.2.



Figure 3. Copper oxhide ingot in pillar crypt of Building B.2.

top of the ingot. Mochlos joins Hagia Triada and Zakros as the only sites in Crete to preserve a complete oxhide ingot.

House C.3

We had found remains of a Protopalatial, or Middle Minoan I-II (MM I-II), house in the earlier excavation beneath House C.3, which lies directly across the street from the main entrance to the ceremonial building (B.2). We hoped to find more of this MM house beneath an adjacent room of the LM I house, but instead came upon a pit that had been dug beneath the LM IB floor. The pit was located against the south wall of the room, which appears to have been an ordinary living room within the house, and extended ca. 0.50 m below the floor. It was designed to hold a large hoard of bronze objects, as it was partially lined with stones and plaster and capped with a stone quern. The hoard resembles three other hoards that were found at Mochlos during the earlier excavations, including one in the same house, in that it held both copper ingots and bronze objects. Unlike the three above-mentioned hoards, most of the objects in the recently discovered hoard appear to have still been in use. Beneath the quern at the top of the pit lay half of an oxhide ingot, weighing exactly 15 kg (Fig. 4). It was incised with a mark that also appears on a round bun ingot from the Uluburun ship; the excavators of the Uluburun ship have identified the mark as a ship's rudder. The mark is thought to have been incised on the ingot at the point of its receipt before export to the west and probably identifies ownership. It suggests that the Mochlos ingot came from the same location as the Uluburun ingot, even though it predates it by many years. Ingots from Hagia Triada also bear some of the same signs found on the Uluburun ingots, and if our interpretation of these marks is correct,

the same merchant families who were shipping ingots to Crete in 1300 B.C. were already established in 1500 B.C.

The ingot was placed at an angle against the adjacent wall and sheltered a bronze sistrum that lay immediately beneath it (Fig. 5). The sistrum belongs to a variety with a simple looped frame attached to a U-shaped support at the top of a handle. The frame was pierced at two points on each side to support two cross pins, the upper of which was provided with three small disks, the lower with two. When the instrument was shaken, these disks struck each other and the sides of the frame, while the cross pins also moved back and forth in the frame. It is said to have imitated the sound of the wind blowing through a papyrus grove.

This sistrum was imported from Egypt, probably on the same ship that brought the copper ingots to Mochlos. In Old Kingdom Egypt, this musical instrument was used in the worship of the goddess Hathor, whose head often appears at the top of the handle. Until now, only seven other examples of sistra have been found in Crete—all clay models found in tombs at Archanes and Hagios Charalambos. They are likely to be Minoan copies of bronze originals that were also circulating in Crete, one of which is shown on the Hagia Triada "Harvester's Vase" with exactly the same U-shaped handle attachment as the Mochlos example. Its association with an Egyptian fertility goddess must have appealed to Minoans, who worshipped a fertility goddess of their own. The Hagia Triada example suggests that it was used similarly in Crete as in Egypt—to keep the beat of a chanting chorus during religious rituals, in this case designed to celebrate and assure the fertility of the fields. The location of the Mochlos sistrum in House C.3, directly across from the entrance to the ceremonial building, suggests that someone living in House C.3 used this instrument in the ceremonies that transpired in the building where the goddess was also worshipped.

Building C.7

The project continued to carry out an extensive water flotation program to recover as large a sample of ecofactual material as possible. As in the earlier excavation, 10% of all floor deposits and 100% of the soil from pottery contents and features such as hearths and dumps were set aside for water flotation. The program yielded impressive



Figure 4. Half of a copper oxhide ingot in House C.3.

results this summer and produced a large amount of floral and faunal material in addition to what was collected by hand.

We were also able to begin a systematic organic residue analysis program this summer. The earlier excavation had done some work along these lines: by using gas chromatography and mass spectrometry for the analysis of lipids, we discovered that

beeswax was used as fuel in LM I lamps. However, our earlier program was limited by cost and personnel factors, so we were especially fortunate this summer to find a graduate student from the University of Pennsylvania, Andrew Koh, to take on the Mochlos organic residue analysis for his Ph.D. dissertation. Once objects are extracted from the ground, the organic residues that may have been preserved over the millennia are in immediate danger of being lost, never to be recovered again. Water-soluble residues are especially vulnerable because they are easily displaced through exposure and handling over even a short period of time. Andrew was able to examine all finds before they went to conservation, and his examination produced dramatic results. In Building C.7, a large complex used for manufacturing and agricultural production (which we are still in the process of excavating), we found a LM I vat sitting in situ on a corner platform, in this respect resembling similar vats from Gournia and Vathypetro (Fig. 6). Inspecting this vat for organic remains,

Andrew found many small grape pips and skins still adhering to its bottom. Neither mineralized nor carbonized, they were preserved in an acidic potassium salt of tartaric acid. This acid forms



Figure 5. Bronze Egyptian sistrum from House C.3.

naturally during the fermentation of grape juice into wine and crystallizes in wine casks. If there was any doubt about the function of these vats, there can be none any longer!

Early Remains

While the discoveries in the LM IB settlement were plentiful, they did not prevent us from proceeding with our second goal, namely the exploration of lower levels of occupation on the site. We were able to excavate as far as bedrock in several locations and made a number of discoveries in the course of this work. One such discovery is that many of the LM IB houses appear to have been constructed originally in the LM IA period. We were surprised by this finding, because we had believed that they dated to an earlier phase of the Neopalatial period. A second discovery was no surprise, however, and simply confirmed what we already knew. Most of the Neopalatial houses suffered considerable damage at the end of the LM IA period and were reconstructed at the beginning of the LM IB period, when ashlar sandstone masonry was introduced to the site. Perhaps the most dramatic evidence of this reconstruction was found in the same room as the bronze hoard in House C.3, where Santorini tephra—including a conical cup full of tephra—was found in association with the LM IA destruction debris.

Only a little MM III and Protopalatial material was found in the excavations below the LM I houses. These remains include part of a Protopalatial road beneath House C.3, a Protopalatial foundation deposit beneath House C.7, and a MM III kitchen, rich in organic remains, beneath House D.5. For the most part, however, we came directly upon Prepalatial remains of the 3rd millennium B.C. wherever we dug below LM I levels. We had exposed parts of three Prepalatial houses in the earlier excavation: Prepalatial House 1, which lies beneath House C.1; Prepalatial House 2, which lies beneath



Figure 7. Early Minoan objects, including boats, in Prepalatial House 2.

the ceremonial building; and Prepalatial House 3, which lies beneath the southern side of Building C.7. This summer we found a fourth-Prepalatial House 4—directly beneath the LM I floor deposits of House C.2, which is probably part of one that Seager excavated beneath the same house.

All of these houses are extensive and may have formed a large closed settlement of the sort found at Myrtos, Fournou Koriphi. The picture of this settlement is by no means clear, however, and we hope to expose a lot more of it in the summer of 2005. Most of the floor deposits belong to the EM IIB period and contained some examples of Vasiliki ware. Only in the case of Prepalatial House 3 did we find much evidence for EM III, including walls of this date overlying earlier Prepalatial walls. The most exciting Prepalatial finds were made in House 2, beneath the southwest wing of the ceremonial building, not far from the area where we found an intact EM II goblet in earlier excavations. A large deposit of intact clay objects lay in a stone-lined bin at the northwest corner of one room. Many of the objects were found in pairs. For example, there were two large tankards, two large plates, two tall pyxides, two jugs, two bowls, and two clay boats (Fig. 7). None of the objects were decorated, but a Vasiliki ware sherd found with them suggests that they should be dated to the EM IIB phase. Why they were all placed together and what they mean is less clear.

A lot of work remains to be done to complete our two goals. A number of unexcavated LM I houses lie around the settlement area that we have exposed, and there are also extensive Hellenistic remains on the island. Because we have only one year remaining on our excavation permit, we shall resist the temptation to investigate these remains, and we will leave them instead for future generations. □

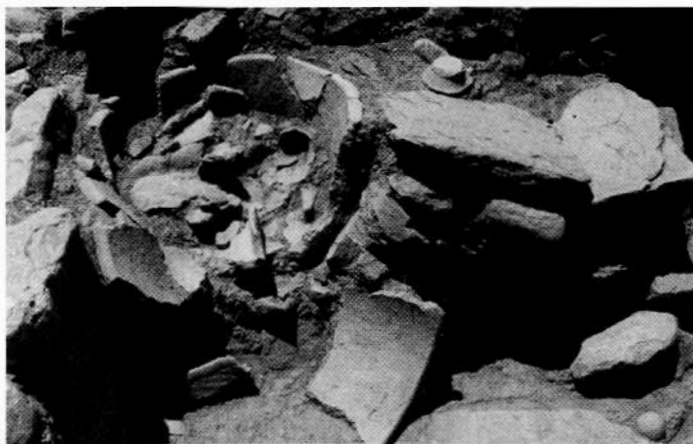
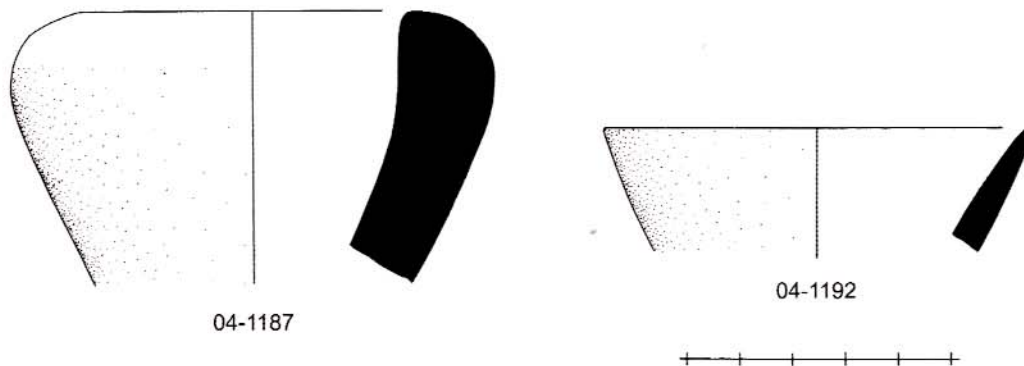


Figure 6. Vat in Building C.7.

EXCAVATIONS AT AZORIA IN 2004: The Early Iron Age Settlement and the Final Neolithic Houses on the Southwest Terrace

by Donald C. Haggis and Margaret S. Mook



*Figure 1. Late Prepalatial vessels from the southwest terrace.
Drawing by Roxana Docsan.*

Excavations at Azoria in 2004 concentrated efforts on terraces southwest of the hilltop of the South Acropolis, where evidence of stratified Early Iron Age and Final Neolithic (FN) occupation had been recovered underneath the Archaic buildings in 2003. While indications of Late Prepalatial activity—including a stone bird's nest bowl and goblet (Fig. 1)—were found along the terrace, stratified material of pre-Archaic habitation consisted of the remains of Late Minoan IIIC (LM IIIC)-Late Geometric (LG) buildings that had been either abandoned or filled in as part of the modification of the hilltop at the end of the seventh century B.C.

By the beginning of the sixth century B.C., the southwest terrace of the South Acropolis of Azoria had been significantly rebuilt, utilizing the remains of earlier buildings as foundations for a new civic complex—a series of structures that appear to have been storage and food processing facilities for a monumental public building,

probably the city's prytaneion. One of the striking characteristics of this urban development is the transformation of the site's Early Iron Age topography to accommodate a new idea of urban space and its various civic institutions. Indications are that the transitional phase was sometime in the late seventh century, a period in which the Early Iron Age landscape became irrevocably altered. The physical evidence for urbanization (e.g., the construction of spine walls, corridor houses, streets, an agora, temple, andreion, and prytaneion) suggests a significant event or series of events leading to the establishment of the city as regional center. While the change seems stratigraphically sudden within areas occupied by the Archaic civic complex—the now proverbial punctuated equilibrium—it remains to be seen if earlier stages of the process are recoverable elsewhere on the site. Perhaps the pattern of development is in keeping with the constant and gradual growth of settlements

throughout the Early Iron Age, as can be seen at contemporary sites such as the Kastro, Kavousi.

Although we had recovered remains of LM IIIC and Early Iron Age occupation from across the site in 2002 and 2003, this past summer a very clear pattern of renovation became apparent on the west slope, where Early Iron Age buildings were recovered from the full extent of the excavated area on the southwest terrace. Archaic structures were built directly into the hill slope—an ambitious process of rebuilding that evidently involved excavating through Early Iron Age levels in order to establish new foundations and then filling in the surrounding areas with a thick layer of gravel to stabilize the walls, support the terraces above, and reshape the terrain.

Pottery from earlier levels is found throughout the floor packing and fill layers under and around the Archaic buildings. In many cases, the Archaic walls and surfaces were built directly on top of LM IIIC or FN levels. In some instances, large vessels, such as a LM IIIC pithos or Geometric krater, were saved and recycled for use in the sixth century settlement. Substantial parts of LM IIIC buildings are visible in two trenches (D300 and D500), usually in the slope behind or under the Archaic buildings, where they were preserved by the ambitious artificial terracing operation at the end of the seventh century.

At the far southern edge of the prytaneion complex of the southwest terrace, an Archaic animal bone dump had been established in an abandoned room of Early Iron Age date. A complex series of LM IIIC-LG surfaces was recovered across the west and southern areas of the room. The Geometric surface in the room's southeast area had on it tumble evidently fallen from the wall bedding that runs along the southeast edge of the trench. A segment of a LM IIIC wall and surface was



Figure 2. Maria Liston and Rodney Fitzsimmons excavating Final Neolithic Building I. Photo courtesy of the Azoria Project.

recovered in the southwest corner of the trench; it appears to have been constructed directly on top of a FN wall.

The Final Neolithic Settlement

Excavation in a series of sondages along the southwest terrace exposed FN walls, suggesting the remains of three separate buildings. The northernmost FN structure (Building 1) consists of an east-west wall that runs underneath two Archaic storerooms, where it joins with a short segment of a return (west) wall. Two dolomite cobble-paved surfaces, forming rectangular (ca. 0.70 x 0.90 m) platforms, were constructed against the west face of this return wall, perhaps on the exterior of the building (Fig. 2). Above these platforms, an anthropomorphic bird-headed figurine was recovered (Fig. 3). East of the wall—perhaps within interior space—was a pit containing a fragmentary pot full of pig bones (Fig. 4). Neither the bones nor the pot appear to have been burned, but dark ashy soil and carbon around the vessel

suggests the location of a pit hearth. Among the bones, many of the meaty parts of the animal were present; the form of the articulated units suggests that parts may have been removed after cooking.

Final Neolithic Building 2 lies to the south of Building 1. Its north wall (excavated in 2003) connects with two long segments of north-south walls that form two small rooms. The complete plan of the structure is unfortunately obscured on the north by Archaic and Early Iron Age surfaces and installations left in situ during excavation. Both walls are wide-ca. 0.70-0.80 m-and have two well built faces of large dolomite cobbles or small to medium sized boulders, with small stones and gravel filling the core created by the two faces. A short, but well built, cross wall runs between these long walls, forming the north wall for a small room that is ca. 1.40 m wide and ca. 2.60 m long. The northern half of this room had a well preserved FN surface. Although the surface in the southern part of the room was intact, it was covered by LM IIIC floor-packing asso-

ciated with a rebuilding of the southern extension of the western FN wall. The LM IIIC wall segment is easy to distinguish from its FN predecessors, because it makes use of much larger and more regular gray limestone and dolomite boulders. It is constructed directly on top of the FN wall foundations and conforms to its line. Final Neolithic Building 3 is indicated by a third north-south wall recovered west of the other two buildings. The wall is of the same construction technique as the others, but appears to be part of another building or room continuing into the scarp on the west side of the trench.

Thus, the FN remains so far excavated on the southwest terrace indicate three separate structures: (1) a building on the north with a hearth and exterior paved platforms; (2) a building on the south, separated from the north building by an alley and containing two small rooms; (3) a building on the west, represented by a single wall-presumably

the eastern edge of the room. One purpose of continuing work in 2005 will be to expose more of this third building, while expanding excavation to the south along the southeast terrace.

The form of the settlement indicates distinct architectural units in an open plan, consisting of individual buildings separated by alleys and courtyards instead of the agglomerative arrangement typical of Bronze Age spatial organization. The spaces between the buildings have considerable ceramic and chipped stone (chert) debris, suggesting discarded material. The chert is mostly a poor quality, veined, dark gray to black type used as blades and scrapers. A red chert blade and transverse arrow head were also recovered in 2004. The cobble-paved platforms in B700 remain a mystery, although it is likely that they occupied exterior-perhaps courtyard-space that was used as a general work area. The presence of the anthropomorphized bird-headed figurine (Fig. 3) is of some importance, as such figurines have been found in other Neolithic contexts in exterior (as well as interior) spaces associated with food storage and processing. The function of the room to the east of the platforms-possibly a

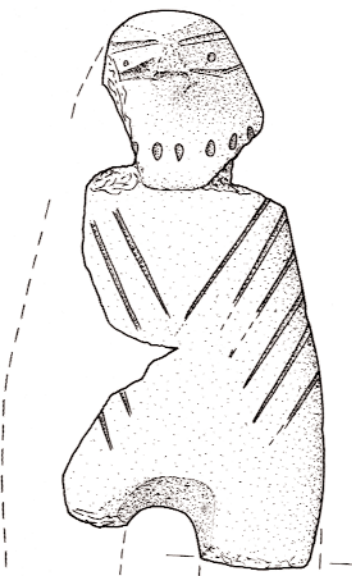


Figure 3. Anthropomorphic bird figurine.
Drawing by Roxana Docsan.



Figure 4. Final Neolithic Building 1: pig bones in situ.
Photo courtesy of the Azoria Project.

kitchen area-is indicated by the pit with the pig bones. The small size of the rooms in Building 2 suggests storage facilities, although tools and production materials were found above and upon the floor surface of the southern room. A concentration of chert tools and production materials was also recovered from the narrow alley between Buildings 2 and 3. Another interesting find is a rectangular schist slab with a worked (abraded) depression in the center and, at one end, a series of 11 pecked depressions ca. 0.5-1.0 cm in diameter that form a rough circle ca. 7-8 cm in diameter. The tool may have been a work table or platform for drilling or knapping.

Funding for the 2004 season was provide by the National Endowment for the Humanities (RZ-20812); the National Geographic Society; the Loeb Classical Library Foundation; the College of Arts and Sciences, the Office of the Vice Chancellor for Research, and the Department of Classics of the University of North Carolina at Chapel Hill; and the Institute for Aegean Prehistory. The directors are grateful for the continuing support of the staff of the Institute for Aegean Prehistory Study Center for East Crete. □

THANKS

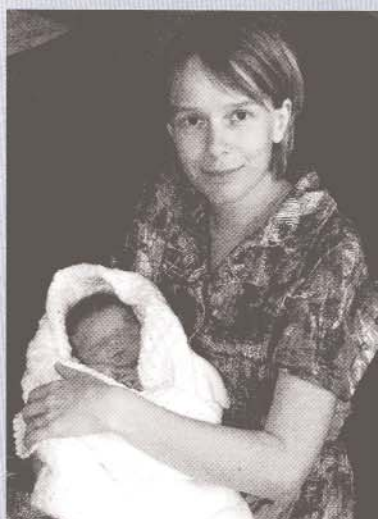
The Study Center would like to thank Jennifer and C. Thomas Shay for their contribution of books to the Center's library. Donations are always welcome, and can be mailed directly to the Study Center.

This past summer, Antonia Stamos and Andrew Koh teamed up once again to conduct Electronic Distance Measurement (EDM) and Ground Penetrating Radar (GPR) surveys for the Study Center. They returned for the second year to the site of Mycenae, where the field season was under the direction of Christofilis Maggidis. Antonia and Andrew focused their efforts on the area just below the acropolis and on the citadel in the area between Buildings M and N. In addition, Antonia worked for two weeks on the island of Mochlos off the coast of East Crete, looking for additional data in the area of the Hellenistic Fort on the summit of the island.

Jerolyn E. Morrison from the University of Houston was the first INSTAP Study Center Intern at the W. A. McDonald Petrographic Laboratory. For three months, Jerolyn worked with the Center's Petrographer, Eleni Nodarou, learning to make thin sections of material from the excavations at Syme. Jerolyn also grouped the sections according to Whitbread's classification system and worked with the petrographic microscope to study thin sections of pottery from Petras.



Senior Conservator
Michel Roggenbucke at
work in the William
Coulson Conservation
Laboratory.



Kathy Hall and
Doug Faulmann are
happy to announce
the birth of their
daughter, Rosie.
She was born on
May 25, 2004.
Congratulations!

LASITHI PHOTO EXHIBITION OPENS IN PSYCHRO

by Philip P. Betancourt

The Lasithi Plain has a long and exciting history of archaeological excavation dating back to the 19th century. A new photographic exhibition illustrating the discoveries in the Plain opened in Psychro on August 6 with over one hundred images of the sites and their architecture, sculptures, bronzes, ceramic vases, figurines, sealstones, and other discoveries. The new display has been completed thanks to a collaboration between the Study Center and the 24th Ephoreia of Prehistoric and Classical Antiquities. About 450 people attended the festive opening of the exhibition, which will remain on view in the future. The exhibit is in a stone building that was formerly used as a school. It is easily visited, because the building is situated on the short road leading uphill to the Dictaeon Cave from the modern highway that encircles the Plain; the exhibit is on the left as one drives uphill.

Stavroula Apostolakou, Acting Director of the Ephoreia, and Alekos Nikakis, Conservator for the Ephoreia, organized the exhibition and provided 10 large cases to contain the collection of color and black-and-white photographs. Philip Betancourt, James Muhly, Susan Ferrence, Chronis Papanikolopoulos, and Stefi Chlouveraki (representing Temple University, the American School of Classical Studies at Athens, and the Study Center) assisted with the project. Many of the photographs are new, and they include several unpublished images. Much of the work of preparing the photographs was done by Susan Ferrence with the assistance of Hilary Goodman. Photographs, plans, and maps are courtesy of the



A view of the exhibition

Archaeological Museum in Herakleion, the Archaeological Museum in Hagios Nikolaos, the Ashmolean Museum, the INSTAP Study Center, the British School of Archaeology at Athens, the town of Psychro, Leslie Day, Susan Ferrence, Kevin Glowacki, Krzysztof Nowicki, and Philip Betancourt.

Several of the archaeological sites from the Lasithi Plain and its surrounding mountains are featured. Images illustrate the architecture and finds from several places: the Dictaeon Cave at Psychro, famous as the mythological birthplace of Zeus, where many bronze figurines and other items have been found; Karphi, a LM IIIC refuge site on a peak at the north of the Plain, where a shrine contained examples of the "Goddess with Upraised Arms"; Plati, a Minoan town at the western end of the Plain; the Trapeza Cave, used as an ossuary in Middle Minoan times; Papoura, a peak sancturay near the Plain; Krasi, a tholos tomb north of Lasithi; and the Hagios Charalambos Cave, the most recently excavated site in the region.

Many residents of the Lasithi Plain helped with the transportation, logistics, housing accommodations, food, labor, and other help needed by the recent excavations at the Hagios Charalambos Cave. The exhibit now provides a permanent display of this excavation and the many past projects that have taken place in this historic part of Crete. Among the unpublished images from the recent project at Hagios Charalambos that visitors to the exhibit can see are five examples of the Egyptian musical instrument called a sistrum, seals of hippopotamus ivory, Middle Minoan human figurines of bone and ivory, ceramic vases, and many examples of the jewelry that accompanied the burials in this Minoan ossuary. □



Exhibit case highlighting the discovery of a clay sistrum from the Hagios Charalambos burial cave

ANNOUNCING THE FRIENDS OF THE STUDY CENTER

The INSTAP Study Center for East Crete was founded in 1997 and is a unique facility for archaeological research, especially in the area of Prehistory. The Center is committed to facilitating research publication in the broad field of Cretan studies, with a focus on archaeology and ethnology.

At the Study Center, scholars have access to a wide range of modern facilities to support both their field work and research aims. Perhaps the most important of these is the library, which is dedicated to all periods of Cretan history, with an emphasis on the Aegean Bronze and Iron Ages. The library contains over 2,000 volumes, 1,000 journals, and an offprint file with over 2,700 articles. Three state-of-the-art laboratories are dedicated to the study of artifacts: a photographic facility with a full-time professional photographer for both artifact and site photography; the most advanced conservation laboratory on the island with a staff of three full-time professional conservators and a rotating group of assistants; and the William A. McDonald Petrography Laboratory (opened in 2002) with a full-time petrographer who makes thin-sections of pottery for ceramic analysis and evaluation.

The Center also employs a full-time archaeological draftsman and a team of assistants for both object and site drawings. During the summer months, ground penetrating radar (GPR) equipment and a trained specialist are available to help excavators in locating as yet unexplored structures. The Center houses a computer facility with high-quality scanning and printing capabilities. Numerous work spaces are open for use by local excavation teams, and a large stoa area provides study space for artifacts.

Over the years the number of projects and individuals using the Study Center has increased, and the services that are provided have been expanded. The Friends of the Study Center was founded in order to support the facility and also raise money to help the Study Center meet these new challenges. Our two goals for the immediate future are to expand the physical space available for our library and to fund the Assistant Petrographer position in order to increase the number of petrographic samples that can be produced for archaeological projects.

The Friends of the Study Center hosted their first lecture at the University of Pennsylvania Museum on May 24th, 2004. Peter Pfälzner, Professor of Near Eastern Archaeology at the University of Tübingen and director of excavations at Qatna in inland Syria, discussed the new discoveries at the site. Dr. Pfälzner's work focuses on the Bronze Age palace at Qatna, which contained tablets from the archive of King Idanda, a royal tomb with spectacular furnishings, and more than 3,000 fragments of Aegean frescoes.

On November 3rd, 2004, Jeffrey Soles, Professor of Classical

Studies at the University of North Carolina at Greensboro, presented a lecture that highlighted the newly discovered metal hoards at Mochlos, Crete. Jeff Soles and Costis Davaras have been co-directors of the excavations at Mochlos since 1989. This fall lecture at the University of Pennsylvania Museum was the first presentation of such spectacular finds as a bronze sistrum, a trident, and ingots of copper and tin.

Our spring lecture will be held on April 28th, 2005. We are happy to announce that George Bass, the founder of the Institute of Nautical Archaeology and Professor Emeritus at Texas A&M, will present a lecture on underwater archaeology and the Uluburun shipwreck. This event will be held in Rainey Auditorium at the University of Pennsylvania Museum at 6:00 p.m. Dr. Bass' talk is the keynote address for a graduate student conference titled "Land and Sea: Trade and Exchange within the Eastern Mediterranean and the Near East during the Aegean Bronze Age." The conference is hosted by the Center for Ancient Studies at the University of Pennsylvania, the Art History Department at Temple University, and the Art and Archaeology of the Mediterranean World graduate group at the University of Pennsylvania. Papers will be presented on April 29th, 2005. For more information, please visit the conference's website at: dept.arth.upenn.edu/aamw/landandsea.

We have all noticed that the AIA's annual meeting in January is the perfect time to get back in touch with colleagues that we do not get to see over the academic year. In order to provide a venue for all Aegean Bronze Age enthusiasts and scholars to reconnect, the Friends of the Study Center will host a party for the Study Center at the AIA meetings in Boston on January 7th, 2005 at 8:00 pm. We hope to see you there!

Elizabeth Shank, Director
The Friends of the Study Center

MEMBERSHIP LEVELS

Joining the Friends of the Study Center indicates your support of our ongoing mission to provide the best facilities, staff, and resources to archaeological projects in Crete. Membership benefits include annual updates on the contributions of members toward the Center's fundraising goals and special discounts on Aegean Bronze Age talks and dinners sponsored by the Friends of the Study Center.

All donations are tax deductible to the full extent provided under the law.

Please make checks payable to Friends of the Study Center

and mail them to: Friends of the INSTAP Study Center for East Crete, 3550 Market Street, Suite 100, Philadelphia, PA 19104

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THE INSTAP STUDY CENTER FOR EAST CRETE

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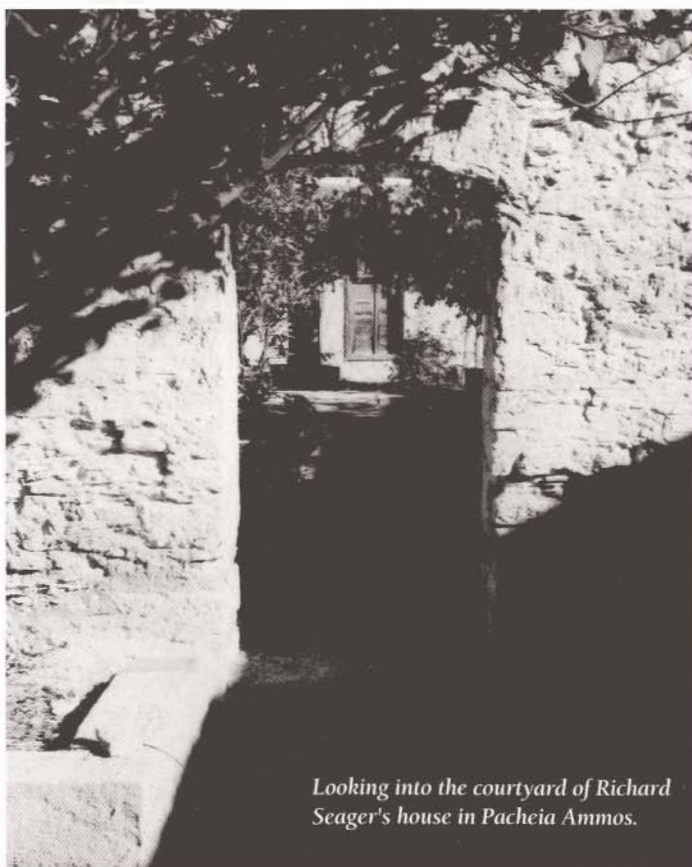
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To request an INSTAP-SCEC application form, inquire about library holdings, or find out more about the center, please contact the Director at the above address.

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Looking into the courtyard of Richard Seager's house in Pacheia Ammos.