

# INSTAP-SCEC NEWSLETTER

(The INSTAP Study Center for East Crete)

Edited by: Cheryl R. Floyd  
Vol. I, No. I. (April, 1998)



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## Letter from the Director by Thomas M. Brogan

The newsletter provides a wonderful occasion to welcome everyone to visit and use the INSTAP Study Center for East Crete. "The Kentro," as it is known locally, opened this summer after twenty-two months of pouring concrete, plastering walls, tiling floors, and wiring rooms. I would like to thank everyone who helped make the construction a success. On June 11th, with the generous assistance of our colleagues in the KD Ephoria of Prehistoric and Classical Antiquities, we began moving in material from the excavation and survey projects of Chrysokamino, Gournia, Halasmenos, Kavousi, Mochlos, Pseira and Vrokastro - projects which now call the center "home."

The climax of the summer's activities came on the 19th of July, when more than 1000 friends, dignitaries, archaeologists and villagers gathered for the formal opening celebration. After our local priest's blessing and the warm, official words from representatives of the Greek Ministry of Culture, the American Embassy, INSTAP-SCEC, and the American School of Classical Studies, guests were treated to a Cretan *glendi* with lyra music, traditional dances, food and drink.

Four stimulating lectures completed a busy summer and started a tradition that will be expanded in coming years.

This fall and winter work continued on a reduced scale. The staff, a few scholars continuing from the summer, and some new members from as far away as Australia or as close by as Aghios Nikolaos, used the library and/or worked on material stored at the Center.

We encourage anyone working on a Cretan topic to consider using the Study Center as a research base, particularly between September and June. *OSCS*

\*\*\*The INSTAP-SCEC library is continually accepting contributions of books, offprints, and maps relevant to the Aegean. To make a donation, please contact:

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## Archaeological Projects at the Center, 1997

by Cheryl R. Floyd

During the 1997 season, six archaeological projects made use of the facilities at the INSTAP Study Center for East Crete. These projects included the archaeological excavations at Kavousi, Chrysokamino, Mochlos and Halasmenos, as well as the Vrokastro and Gournia survey projects. Approximately 80 project members and staff worked at the Center, making good use of the air-conditioned photography lab, conservation lab, computer room, and drafting room, not to mention all of the wonderful storage space in the basement and the strewing space in the stoa.

The Kavousi Project, sponsored by the University of Tennessee and directed by Geraldine Gesell, Leslie Day and William Coulson, conducted its eleventh season of work. During the summer, the study and processing of information from the sites of Vronda and Kastro continued. Geraldine Gesell studied the ritual material from Building G (the Shrine) and oversaw the conservation, drawing and photography of the ceramic statues of the goddess with up-raised hands, the snake tubes, and other ritual equipment. Leslie Day completed the study of the pottery from Building E and the Late Geometric cremation cemetery at Vronda. Additional work on the Vronda material by Nancy Klein included the final study of the pottery from LM IIIC Buildings C and D. She also studied the architecture of Building G. Studies by Kevin Glowacki focused on the pottery from Vronda Buildings I, O, N, and G. The study of the Kastro material by Margaret Mook focused on the stratified levels in Rooms 35 and 36 that dated from the LM IIIC period to the Orientalizing period. She also examined large deposits of pottery from the Late Geometric re-

modeling fill from the Kastro.

The Mochlos Project, under the direction of Jeffrey Soles (Director), Costis Davaras (Director), Thomas Brogan (Assistant Director) and Ann Nicgorski (Assistant Director) conducted post-excavation studies. In addition to finishing one of the Mochlos volumes (*Mochlos Period III: The Neopalatial Settlement on the Coast*), the project members made considerable progress on a second volume entitled *Mochlos Period IV: The Mycenaean Settlement and Cemetery*. The pottery studies for these volumes were supervised by graduate students Kellee Barnard and Angus

Smith, respectively. This summer, Natalia Vogeikoff determined the Hellenistic pottery from the site to be from the 1st century B.C. Project member Lisa Little completed her study of the LM III skeletal remains for volume II of the series. In addition, site conservation work was overseen by Chris Witmore.

The Chrysokamino Project finished its second and final season of digging. Several areas were investigated: the Metallurgy Location, the Habitation Location, a rock shelter and an agricultural terrace. Director Philip Betancourt and Co-Director James Muhly studied material from the Metallurgy Location. Excavations at the Habitation Location, led by Co-Director Cheryl Floyd, revealed the majority of the outlying LM IIIA structure. The survey team, led by survey supervisor Lada Onyshkevych and computer specialist Brad Hafford, continued its field work with the Topcon Total Station. The Halasmenos Project, a Greek-



The site of Gournia. Photograph by Philip Betancourt



Stirrup jar found at Ginara, Vrokastro Survey Project.

American *synergasia*, conducted its sixth year of excavations, in early October. Team members included Metaxia Tsipopoulou (Director), David Rupp, Michael Wedde, and Krzysztof Nowicki, as well as other



specialists and staff. Excavation of Area B, where five LM IIIC houses have come to light, was completed. Excavations were also carried out in Area A, where a bronze fibula, one of the largest yet found in Crete, was recovered. Work at Katalimata, above, in the Ha Gorge, was led by Krzysztof Nowicki. Here, the excavation of the third house on the site was nearly completed. In addition, stratigraphical trenches were dug which produced interesting material from the earlier (FN and MM II) phases at this location.

The Vrokastro Project, directed by Barbara Hayden and Jennifer Moody, is well advanced in its study seasons. This summer, Dr. Hayden re-examined the earliest sherds from the FN-EM II sites and described the various pottery fabrics. This season's work was conducted in preparation for the final publication of the project, which will occur in multiple volumes, all underway.

The Gournia Project completed the fieldwork associated with the survey of the Gournia region that was carried out from 1992 to 1994. Harriet Blitzer completed research into traditional agriculture and land use in the Isthmus of Ierapetra. Drawings of the Medieval - Ottoman pottery were also completed. Director L. Vance Watrous revisited many of the sites discovered during the survey to prepare drawings and make photographs for publication. In addition, a state plan was made of Harriet Boyd's Shore House and aerial photographs of the Gournia coastline were taken.

Considerable work was accomplished during this first summer at the INSTAP Study Center for East Crete. In addition, many of the initial problems of operation and procedure were solved by the Center's director and the often harried staff. We are all looking forward to the 1998 summer season which promises to be equally busy. *OSOS*

### INSTAP-SCEC: Statement of Purpose

INSTAP-SCEC is devoted to the advancement of Cretan studies from Prehistoric through modern times, with a special emphasis placed on east Crete. As a research facility, we welcome both student and senior members of all nationalities whose research concerns Crete or involves the finds or data from any of the American or Greek-American excavations or surveys that are member projects at the Center. Appropriate areas of study for members include, but are not limited to, anthropology, archaeology, art history, classical languages and literature, conservation, epigraphy, ethnology, history, and materials sciences.

### Contacting INSTAP-SCEC

To request an application form, inquire about library holdings at the Center, or request other information, please contact the Director.

To receive a general information packet about the Center, or for information regarding fees, personnel or billing, please contact the Coordinator for Research and Administrative Services.



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### LECTURES AT THE CENTER, SUMMER, 1997

#### July 22nd

Natalia Vogeikoff, *Mochlos in the Late Hellenistic Period*

Philip P. Betancourt, *The Excavations at the Chrysokamino Metallurgy Workshop*

#### August 14th

Lyla Pinch Brock, *The Tel el Dab'a Frescoes- an Epigrapher's Perspective*

Theodore Brock, *King Tut's Rag-Top*

## Study Center Tour of Crete a Success

by Al Leonard, Jr. and Mary Leonard

This past July, Mary and I led a small but intrepid band of travelers to Crete for a study tour timed to coincide with the opening of the INSTAP Study Center for East Crete in Pacheia Ammos. The group consisted of Beryl L. Anderson (Ottawa, Canada), Marilu Cain (New York, NY), Elliot Greenberg (Tucson, AZ), Robert and Kathleen Miller (Winston-Salem, NC) and Vivienne Oxman (Tucson, AZ).

Upon arriving in Athens, our group was treated to a tour of the Goulandris Museum of Cycladic Art and the American School of Classical Studies by Professor James D. Muhly, the School's new Director. While in Athens, we were also shown the latest discoveries in the Agora by Dr. John Camp. It was then off to Crete, home of the Minoan Civilization, where we enjoyed a sequence of in-depth visits to a variety of sites by the following scholars (listed alphabetically): Dr. Eleni Banou, Archaeological Museum of Herakleion; Professor Philip Betancourt, Temple University; Professor Leslie Preston Day, Wabash College; Professor Geraldine Gesell, University of Tennessee; Dr. Alexandra Karetsoy, Director of the Archaeological Museum of Herakleion; Professor Hugh Sackett, Groton School; Professor Jeffrey Soles,

University of North Carolina-Greensboro; Dr. Metaxia Tsipopoulou, Greek Ministry of Culture; and Professor L. Vance Watrous, State University of New York at Buffalo. The generosity of these scholars in so freely giving of their time and energy was the single, most important element in the tremendous success of our tour. Mary and I, and each member of our little band, wish to thank them again for their kindness.

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Participants of the 1997 Study Center Tour of Greece, from left to right: Elliot Greenberg, Beryl L. Anderson, Vivienne Oxman, Robert Miller, Marilu Cain, James Muhly, Philip Betancourt, Al Leonard, Jr., and Mary Leonard. Photograph by Kathleen Miller.

## Sherds and More Sherds: A Year at INSTAP-SCEC

by Margaret S. Mook

During the 1997-1998 academic year I will complete the study of the pottery recovered from the Kavousi Project's excavations on the Kastro, a settlement inhabited from Late Minoan IIIC into the Orientalizing Period (ca. 1200-650 B.C.). The Kastro is one of the few settlements excavated in Greece with a continuously stratified habitation sequence from the end of the Bronze

Age through the Early Iron Age. Through contextual, fabric, stylistic and quantitative analyses of the pottery, I am establishing the relative chronology and typology of the ceramic sequence for the Kastro, which is critical not only for the study of this particular site, but for all Early Iron Age archaeological material in eastern Crete. Financial support from Iowa State University, in the

### LIBRARY UPDATE

by: Eleanor J. Huffman

As of Nov. 1997, the following services were available at INSTAP-SCEC:

1. An **online catalog** listing the entire collection to date (including books, periodicals, and the library's extensive offprint collection) that can be searched by author, title, date of publication, and publisher
2. A **photocopying machine** functioning with key cards
3. An extensive **off-print collection** and a small, but growing **map collection**

Projected accomplishments for the library include:

1. The ability to search the online catalog by subject will be available.
2. Library catalog will be accessible via the Internet once the Center's web page is completed.
3. We hope to increase our network of library book donors.



The library now has a full run of the following publications:

*Aegean Archaeology*  
*Annuario*  
*AJA*  
*BSA*  
*CMS*  
*Cretan Studies*  
*Études Crétoises*  
*Hesperia*  
*JFA*  
*JMA*  
*JPR*  
*SMEA*  
*Arch. Ephemeris*  
*Deltion*  
*Praktika*  
*To Ergon*

Partial runs of the following publications are also part of the collection:

*Antiquity*  
*BCH*  
*MASCA Journal*  
*Minos*  
*TUAS*  
*Amaltheia*  
*Kretika Chronika*  
*Kretike Estia*

Currently, library hours for Center members are unlimited. Non-members should contact the director to arrange library visiting hours. The collection is non-circulating for both members and non-members.

form of a Faculty Improvement Leave, has made this year at INSTAP-SCEC possible.

I have been far more productive on Crete this year as a direct result of the facilities provided by the Center. While preparing my PhD thesis a few years earlier in Pacheia Ammos, study was especially challenging due to limited indoor space, the lack of exterior work areas, poor lighting, a near absence of heat, and the threats posed by rats in the storeroom. It was archaeological study requiring survivalist camping skills! By contrast, the Center provides spacious and comfortable work areas both indoors and out. The interior is bright and warm, and the support facilities are excellent. The physical environment is very conducive to high productivity and the collegial atmosphere inspired by the Director, Tom Brogan, makes the Center an ideal place to study.

Working together with the other members and staff of the Center has the added benefit of fostering discussion between individuals from different projects in the area, as well as the wider archaeological community. The scholarly exchange of ideas taking place makes the Center a truly exciting and professionally fulfilling place.

This fall I spent the majority of my time strewing Kastro pottery in the stoia with the assistance of Fred, the Center's resident feline in charge of rodent control. The spectacular view of the Bay of Mirabello and the Ierapetra Isthmus with the Thripti mountains in the background provided an additional source of inspiration. The course of agricultural life in the area also offered

pleasant and instructive diversions from work. In late October and early November *raki* production was in full force and presented opportunities for varied social interactions with members of the local community, including Manolis Zervakis from Pacheia Ammos and Manolis Kasotakis from Kavousi. Learning about traditional production techniques while enjoying the fullness of Cretan hospitality was definitely one of the highlights of life in Pacheia Ammos this fall. As December approached, the olive harvest began and in 1998 we will enjoy not only the olives produced by the Center's few trees, but also the olive oil offered to us by our generous neighbors and friends.

I am looking forward to the rest of my year at the Center. It is such a pleasure to discover sherds that mend into a nearly complete vessel, then be in a position to have them restored at once by the Center's conserva-



Fred among the Kastro sherds. Photo by Margaret Mook.

tors. Also, the opportunity to search for published parallels in the excellent and growing library with the actual sherd in hand is a unique experience. This allows for quicker identification and accurate reconstructed drawings of many pieces that would otherwise require further research elsewhere, away from the archaeological material. In addition, the work of our artists is enhanced by the availability of scanners and graphics programs, which facilitate the production of illustrations for publication. It is accurate to say that I will be able to complete both the study of the pottery and the manuscript for this material from the Kastro during my leave only because of the unique facilities present at INSTAP-SCEC. *OSCS*

## A Few Words from the Photographer

by Katherine E. May



A review of the first summer season's photographic services has prompted some production changes, as well as some new equipment purchases for the 1998 season at the Center.

Last summer, it became apparent that having 35 mm slides processed outside the studio, in Aghios Nikolaos, was too time-consuming and even erratic at times. To avoid this problem, in June through August, the Center's studio will process the slide film that is shot in the studio. Thus, the turn-around time for color slides will be the same as that of black and white contact sheets. It is not certain whether this service will be available for film shot outside the

Center's studio.

The photo studio will also get some new equipment that will allow us to use larger format film. This service will significantly raise the professional quality of the photographic work achieved at the Center.

In addition, soon we will be able to shoot aerial photographs! The INSTAP Study Center for East Crete is purchasing its own kites and equipment to take aerial photos in a variety of wind conditions. More words on this subject will appear in the next edition of the INSTAP-SCEC Newsletter.



## Computer Mapping and Modeling at INSTAP-SCEC

by William B. Hafford

Word processing and database oriented tasks are commonplace in most archaeological computer labs, but a great deal more can be accomplished. Computer analysis of archaeological data is becoming more and more possible, allowing work that would formerly have been prohibitively time consuming, such as major statistical manipulations and examination of spatial variables, to be accomplished in far shorter time.

At the INSTAP Study Center, the potential for such computer analysis is now being realized. Computer mapping and modeling is conducted here on a computer primarily dedicated to such work. This computer is configured as the other IBM compatibles at the Center- MMX Pentium 200 with 64 megabytes of RAM, built in CD ROM, and ZIP and JAZ drives, but it also includes additional hardware and software designed to benefit its analytical

tasks. The added hardware includes a 21" high resolution monitor, a Summagraphics 16 key digitizer, and a HP 36" color plotter. Software additions include AutoDesk AutoCAD release 14, Adobe Photoshop 4.0 and Golden Software Surfer 6.0.

The most extensive use of this equipment has been conducted by the crew of the Chrysokamino excavations, but some initial testing has also been accomplished by the computer team headed by Dr. David Romano working for the Gournia

Project. His team conducted preliminary mapping at the site this past summer and put the equipment through its paces. Although the team only spent four days working at the Center, they were quite impressed and only lamented the fact that there were not more dedicated computer set-ups available to Americans in Greece.

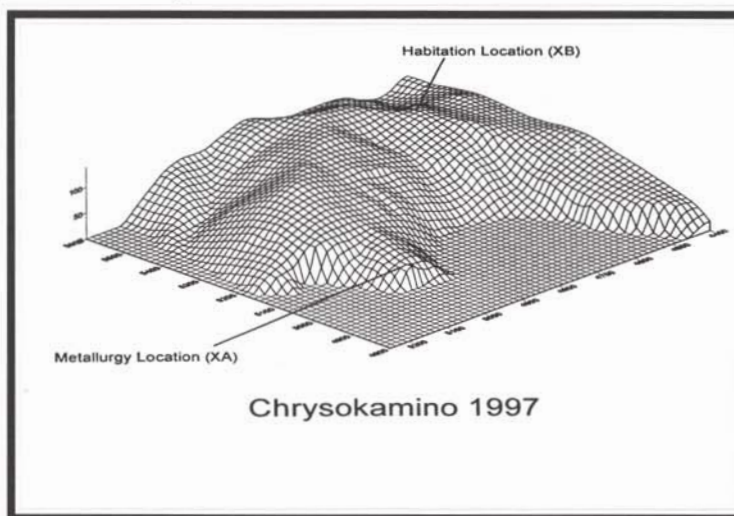


Fig. 1. 3-D Topo map of the Chrysokamino Survey Area, 1997.



Just what can be done with this equipment? The possibilities are wide-ranging, but the most obvious is topographic modeling of archaeological sites. Anything from simple contour maps to three-dimensional texture-mapped models can be constructed. For an example of possibilities, consider the survey/mapping project conducted at Chrysokamino. The model constructed for the larger region is based on physical data gathered with a Topcon GTS 303 EDM over the past two summers and contains more than 4000 points. The area covered is almost a square kilometer, and the model places the two main archaeological locations in their topographic context. A 3-D graphic generated from this model gives a better *feel* for the terrain than a traditional map (see Fig. 1). The use of color in large-scale plots further enhances the 3-D quality. These maps, in addition, can be rotated to any angle, and any number of point overlays can be made.


The possibilities do not end here, however. The purpose of computer mapping is not merely to achieve 'pretty pictures'. Instead, the goal is a better understanding of the data and the site itself. To facilitate such understanding, specialized software must be utilized. The Chrysokamino model exists in both Surfer (as a Digital Elevation Model extrapolated from the 4000+ data points) and in AutoCAD (as vector contours), with added information from survey. AutoCAD provides another perspective, so to speak, and allows the data to be organized differently. Complex layering is possible, which allows for the display and investigation of specific information (such as topographic data) as it relates to other spatial variables. For example, Fig. 2 shows some of the former agricultural uses of the Chrysokamino area. The

desire is not merely to show where olives may have been grown in relation to topography, but rather, to indicate the amount of the area under cultivation. With a simple query to the model, statistical data can be compiled and an estimate of yield determined. This estimate can then be used to form hypotheses about the economy, such as the amount of surplus that could have been generated. With an efficient labeling system of layers within a model, data can be

quickly and easily retrieved and spatial patterning observed. For instance, a survey of the cemetery area on the island of Pseira was conducted in 5 meter grid squares and all items of particular types were coded as found in their appropriate squares. This data was input to a CAD model in different layers for each material type. We are now able to create images which display all squares that contain bronze objects, for example. We can also quickly see if there is any spatial patterning apparent. This

information can be displayed with or without topographic data, including the location of tombs, or other data in the model.

Analyses can be taken still further with the use of GIS (Geographical Information Systems) software. These programs are specifically designed for the analysis of geographic data and include routines for finding slope, paths of least resistance, statistical correlations, and other useful derivations. As yet, GIS has not been conducted at INSTAP-SCEC, but it is certainly possible as we continue to expand our horizons.

The possibilities are virtually limitless. Computer models can help us reconstruct the past and understand the bigger picture in ways that we could not have achieved only a decade ago. As computers become more sophisticated, so do the possibilities. They represent important and vital tools to the archaeologist. 

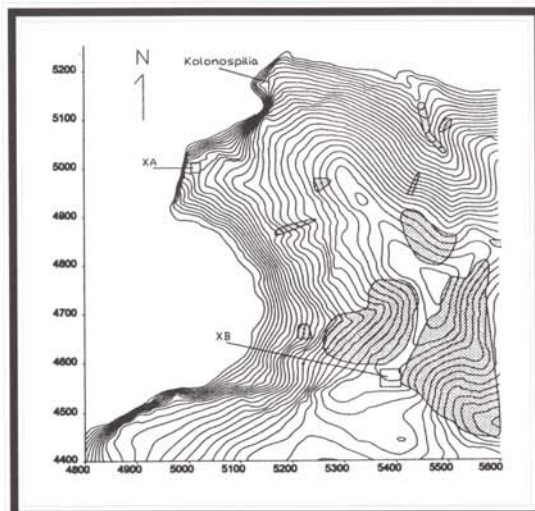


Fig. 2. Land use on the Chrysokamino Estate. The shaded areas indicate land under cultivation in antiquity.

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INSTAP-SCEC, Sketch by artist Lyla P. Brock

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