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## **Early Copán Acropolis Program 1999 Field Season**



**Research Year:** 1999

**Culture:** Maya

**Chronology:** Early Classic

**Location:** Copán, Honduras

**Site:** Copán Acropolis

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### **Introduction**

The second phase of research conducted by the Early Copán Acropolis Program (ECAP) completed its second season in 1999, comprising the documentation, conservation, and analysis of recovered archaeological materials from the tunnel network excavated beneath the Copán Acropolis. Much of this current research is funded by The Foundation for the Advancement of Mesoamerican Studies, Inc. (Grant 98005). The ECAP research has been directed since 1989 by two University of Pennsylvania Museum archaeologists, Dr. Robert J. Sharer (Director) and David W.

Sedat (Field Director). The following is a brief summary of ECAP's research during the 1999 field season (January 17-April 30) at Copán, Honduras.

*Submitted 05/01/1999 by:*

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## **Conservation**

The vital work of conserving the architecture of Early Classic Copán and the many archaeological materials recovered by ECAP's excavations continued under the second season of current FAMSI support. During the 1999 season FAMSI funding once again fully supported the work of an expert professional conservator at Copán, Lynn Grant (University of Pennsylvania Museum). Most of Lynn's conservation efforts were devoted to the exposing and treating of delicate excavated objects in two early royal tombs (Hunal and Margarita) being excavated under the direction of Robert J. Sharer and David W. Sedat. Some funerary offerings require conservation while still in the tomb, while others can be treated immediately after their removal (see [Figure 1](#), shown below) to prepare them for their transport to the ECAP field lab. The remainder of Lynn's work involved the cleaning and conservation of objects in the field lab (see [Figure 2](#), shown below). During the 1999 season this conservation effort was essential to removing all of the pottery vessels and other offerings found on the floor of the Hunal Tomb (site of the burial of a royal male tentatively identified as K'inich Yax K'uk' Mo', Copán's dynastic founder). In addition, Lynn's conservation expertise was essential to the considerable progress in the removal and conservation of objects in the Margarita Tomb, site of the burial of an important royal woman believed to have been the wife of the dynastic founder.

During the 1999 season FAMSI funding was again essential to the architectural preservation effort, supporting the consolidation of major ECAP tunnels and the conservation of the architecture exposed by these excavations (this work was supervised by Fernando Lopez and coordinated with the Honduran Institute of Anthropology and History to ensure compliance with long term site preservation policies). In addition to the scheduled tunnel consolidation effort, several Early Classic buildings required expert conservation of their plaster facades, and with the support of FAMSI funds ECAP was able to hire a crew of Honduran conservators trained in architectural consolidation to complete this work. The disastrous rains from Hurricane Mitch also required an unanticipated response from ECAP. Over four feet of rain fell on Copán during this storm, causing water infiltration and collapse in one of the main tunnels immediate east of the Margarita structure. FAMSI funding allowed ECAP to hire extra labor crews to repair this damage and to seal the source of this water infiltration.



**Figure 1: Project conservator Lynn A. Grant (University of Pennsylvania Museum) is an essential member of the excavation team recovering offerings from the two early royal tombs discovered by ECAP in the lowest levels of the Acropolis. Working in the narrow confines of the tunnel entrance to the Hunal Tomb, Lynn applies a dilute consolidant to stabilize the lid of a ceramic vessel just removed from the floor of the burial chamber. Once these offerings have been stabilized in the tunnels they are removed to the project field laboratory for further conservation, recording, and analysis (see Figure 2).**



**Figure 2: In the field laboratory adjacent to the site, project conservator Lynn A. Grant applies a dilute consolidant to stabilize fragments of bright red slip on the surface of this modeled ceramic lid. Fragments of the lid were recovered from the interior of the vessel it covered, allowing for its re-assembly and consolidation in the IHAH laboratory. Close collaboration between the archaeologist and conservator is vital to preserving the objects and gleaning as much information as possible from their study. (Bu 95-1; Tlaloc Warrior; Lid 1; 001/006/334-015).**

## **Documentation**

The 1999 season again saw the FAMSI grant used to support the documentation of portable materials removed to the ECAP field laboratory from the Acropolis excavation area. This work is under the specific supervision of Ellen Bell (University of Pennsylvania), and carried out in the ECAP field lab. Ellen tracks each artifact, ecofact, and architectural sample on a computerized database (Filemaker Pro), and catalogues all artifacts from primary contexts using a detailed record that is integrated into the computerized database (see [Figure 3](#), shown below). She also supervises the preparation of scaled drawings of each artifact, rendered in both pencil and ink by Jose Espinoza, a highly skilled and trained Honduran draftsman (see [Figure 4](#) and [Figure 5](#), shown below). Finally, Ellen also supervises the recording of each artifact by conventional photography accomplished by Eleanor Coates (University of Pennsylvania) using both color and black and white film, and digital imagery. This

documentation process began in 1997, continued in 1998, and during the 1999 season made considerable additional progress, including the completion of photographic recording of all whole pottery vessels.



**Figure 3: Project archaeologist Ellen E. Bell (University of Pennsylvania) catalogues a basal flange polychrome ceramic vessel found in the upper chamber of the Margarita Tomb. Munsell Color tabs are used to identify the color of each of the pigments to allow for more accurate comparison with other vessels. (Bu 93-2; Margarita Tomb, Chamber 2; Vessel 14; 001/006/214-5).**





**Figure 4: Project artist Jose Espinoza (IHAH) completes an inked scale drawing of a jade figurine recovered from a dedicatory cache located along the central axis of the Ante platform. This and other drawings completed by Sr. Espinoza form the core of an extensive program of artifact and architectural documentation. (O92-1; Ante Figurine; 049/004/021-3).**



**Figure 5: Project artist Jose Espinoza (IHAH) completes an inked scale drawing of a jade figurine recovered from a dedicatory cache located along the central axis of the Ante platform. This and other drawings completed by Sr. Espinoza form the core of an extensive program of artifact and architectural documentation. (O92-1; Ante Figurine; 049/004/021-3).**

## **Analyses**

Also continuing in 1999 were a series of technical analyses for all categories of archaeological materials. This season the FAMSI grant supported the work of the identification and sources of construction materials and architecture, the classification and sourcing of pottery, and the identification of plant remains. These analyses are being carried out by different specialists and US-based laboratory facilities with the support of the FAMSI grant 98005. In addition, in 1999 funding from the University of Pennsylvania Museum supported the sampling of pottery vessels conducted by Dr. Dorie Reents. These samples, along with samples taken from pottery sherds extracted by Ellen Bell, are being exported to the US where they will be used for determine manufacturing sources by neutron activation analyses supervised by Dr. Ronald Bishop (Smithsonian Institution).

The sourcing of pottery from the Acropolis will be a major component of the artifact analysis being conducted by Ellen Bell, complementing the typological and modal classifications also being pursued (see [Figure 3](#)). When completed, these studies will provide important information about vessel functions, changes through time, and the

trade and redistribution of goods. They will also offer critical insight about Copán's external contacts and how these shifted through time.

A wide range of botanical samples were taken by Cameron McNeil (CUNY), assisted by Constance Rocklein (CUNY), during the 1999 season (see [Figure 6](#) and [Figure 7](#), shown below). These involve both macro specimens (extracted by flotation equipment at the site) and pollen samples (extracted by pollen washes of pottery vessels in the field lab). These archaeobotanical samples will be exported to the facilities of the New York Botanical Garden where identifications will be made by McNeil under the supervision of Dr. David Lentz. Once completed, these analyses will identify the plant resources utilized by Copán's ancient inhabitants for food, building materials, rituals, and other uses.



**Figure 6: Project archaeobotanist Cameron McNeil (CUNY) and her assistant Constance Rocklein (CUNY) recover organic material from soil samples through floatation. These remains, which include carbonized seeds and wood, will yield information about the plant materials utilized in the ritual deposits and middens from which the samples were taken.**

The study of construction technology and architecture revealed by ECAP's excavations beneath the Acropolis is revealing changes in building methods and time and energy expenditures over the history of the Acropolis (see [Figure 8](#) and [Figure 9](#), shown below). In 1999 the supervisor of this study, Christine Carrelli (Rutgers University), catalogued the architecture exposed in tunnels adjacent to the ECAP research area



(excavations beneath Structure 10L-26 directed by William Fash, Harvard University) to expand our understanding of Copán's Early Classic construction technology. Samples from architectural components in both ECAP's tunnels and adjacent excavations are currently being analyzed at the University of Pennsylvania Architectural Conservation Laboratory, Directed by Dr. Frank Matero. The results will identify chemical composition to detect ancient building methods and refine the estimates of construction time and energy expenditures.



**Figure 7: Organic materials are separated from the surrounding soil by agitating the sample in a large drum of water until the lighter organic material floats to the surface. This material is then passed through a series of successively finer mesh screens which further separate the sample. The recovered seeds and charcoal are then dried and examined under a microscope.**



**Figure 8: Project archaeologist Christine W. Carrelli (Rutgers University) measures, describes, and sketches a platform facade buried deep within the Acropolis. The architectural catalog created by the meticulous recording of all the platforms, buildings, floors, and even fill episodes that compose the Acropolis makes it possible to calculate the amount of labor invested and to examine changes in construction methods and styles over time.**



**Figure 9:** Precise measurements by Christine Carrelli of even the smallest features are included in the architectural catalog and used in her calculations of construction methods.

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