

# FINAL REPORT

Season One: October 2007 – April 2008

ARCE Groundwater Lowering Response Project, Luxor

“Field School for SCA Conservators”

The Egyptian Antiquities Conservation Project (EAC)  
USAID Agreement No. 263-A-00-04-00018-00

Awarded to

THE AMERICAN RESEARCH CENTER IN EGYPT (ARCE)

Address: 8700 Crownhill Blvd. Suite 507, San Antonio, TX 78209 Tel: (210) 821-7000

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**Statement of the Project:** Karnak and Luxor temple complexes are massive monuments with acres of decorated and undecorated stone. In order to be able to manage the long-term responsibility of preserving these monuments, the SCA requires institution building through training. ARCE's Field School for Architectural Conservators will result in the creation of a cadre of Egyptian conservators who have participated in the project from its inception and who will be taking the lead in conservation activities at the conclusion of the project. The purpose is to enable the conservation to continue after the lifetime of the project, thus ensuring a lasting legacy of the Luxor East Bank Groundwater Lowering Response Project. Topics of study would include inspection/analysis, assessment of intervention, treatments, documentation and publication.

The field school will be conducted throughout the term of the project so that trainees will have participated in the entire conservation process upon completion of their training. Furthermore, by participating in various conservation projects led by professional conservators at all three temples during the duration of the Luxor East Bank Groundwater Lowering Response Project, trainees will experience a variety of different approaches in the face of real situations.

The first session of the conservation field school was conducted from October 2007 to April 2008. 26 SCA conservators were trained in basic conservation recording and documentation techniques. In preliminary discussions with SCA conservation staff at Karnak and Luxor prior to commencement of the 2007-2008 season, it was determined that the present system of documentation of conservation work within the temples was inadequate and not undertaken on a regular basis. Consequently, documentation of the temples was heavily emphasized in the first season's course plan, including the creation and writing of detailed condition reports, accompanied by photographs of current conditions noted therein, as well as learning to map actual damage separately from photographs.

Brief course reports are included on the following pages:

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## **Damage Mapping Component ARCE Conservation Field School**

This report describes the Damage Mapping component of the ARCE Conservation Field School at Luxor that was completed between November 4, 2007 through December 1, 2007.

There were 25 students all told, but one was absent because of a surgery and another because he got married. The heads of conservation for Karnak and Luxor temples, Mohammed and Nasser, came, too. They not only participated, they also helped significantly in translating and explaining what we were doing to the students, especially when doing actual mapping in the Temple of Khonsu, where we did our actual mapping.

This component was designed to familiarize the students with the concept of damage mapping, which they had never done before, as well as to give them actual experience in doing this under supervision.

### **The main areas reviewed and covered are set forth below:**

#### **1- Introduction to Damage Mapping.**

What damage mapping is and is not; mapping of actual damage.

#### **2- Damage Mapping as a form of base line conservation documentation.**

Damage Mapping used as an adjunct to Condition Reports; Damage Mapping as independent, stand alone documentation of present conditions

#### **3- The actual process of Damage Mapping.**

The need for consistent mapping conventions

- 1-The need for consistency within the project
- 2-The need for continuity over time
- 3-The need for flexibility in mapping conventions due to new conditions and changes and alterations over time
- 4-Use of modified Getty color coding from conservation of Tomb of Nefertari; color keys
- 5-Damage maps; architectural maps; polychromy maps; treatment maps

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6- The need to maintain scaling and other metadata-publication references, plate numbers, dates, identification of mapper, insertion of color keys

### **4- Techniques and Equipment of possible use.**

a- Epigraphic drawings-their uses and limitations

1-Epigraphic drawings as a useful guide for mapping

2-Limitations-not intended to be drawings of damage; sometimes do not show damage; sometimes damage not shown accurately; damage may have worsened over time;

b- Digital photography-can be used where no epigraphic drawings available; printed out, photocopy adjusted and used similarly to epigraphic drawings

c- Drawing boards; metric tape measures; rulers, colored pencils, erasers, tracing paper, tape

### **Teaching methodology**

Instruction included both classroom lectures to the entire class as a whole and field work within the temple of Karnak, particularly the temple of Khonsu, e.g., broken down into smaller groups of 5 students each to maximize time spent on individual instruction, the groups being rotated in turn to ensure all groups were instructed on the areas so covered.

### **Individual Student List**

1-Abdalla, Hasan Abdalla Mohamed(Esna, Technician)

2-Ahmed, Nagat Youssef (Luxor-Technician)

3-Ahmed, Sahar Mohamed (Luxor-Technician)

4-El Badry, Abd El Hakim Ahmed (Karnak-Conservator)-DROPPED OUT OF COURSE

5-Elias, Mary Megah(Luxor, Technician)

6-El Senusi, Rokia Hagag (Karnak-Technician)

7-Gayed, Manal Nasef (Mummification Museum-Conservator)

8-Gergius, Maryam Abd El Shahaed(Luxor, or Abou El Good Storeroom, Technician)

9-Hanna, Emad Faik (Luxor-Technician)

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- 10-Hanna, Mounira Mouris (Abu El Guod Storeroom-Conservator)
- 11-Hassan, Saber Ibrahim (Esna-Technician)
- 12-Hussein, Abdel Rahim Qenawi(Esna, Conservator)
- 13-Hussein, Eltayeb abu El Haggag (West Bank-Technician)
- 14-Kader, Ashraf, Mohammed Kassim Abdel (Luxor-Technician)
- 15-Kodary, Eman Ahmed (Karnak-Technician)
- 16-Madny, Al Shazly Shaibi Al Hamed (Esna-Conservator)
- 17-Mahdy, Anwar Fouad (Luxor-Technician)
- 18-Mohammed, Randa Ahmed (Luxor-Technician)
- 19-Mohammed, Wafaa Abo El Hamed (Karnak-Technician)
- 20-Mostafa, Negm Elddin Said (Luxor, Technician)
- 21-Nashed, Amany Email (Luxor Museum-Conservator)
- 22-Afaf Farag Hassany(Karnak)
- 23-Said, Saleh Salem (Luxor-Technician)
- 24-Saleh, Eman Mahmoud Abdallah (Karnak-Technician)
- 25-Tawfek, Eman Wasfy (West Bank-Conservator)

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## **Photography Component ARCE Conservation Field School**

This report describes the Photography component of the Conservation Field School at Luxor, Egypt, completed between October 29, 2007 through and including November 13, 2007.

The participants were 25 in number, as well as the heads of conservation for Karnak and Luxor temples who were on hand to observe their student conservators and technicians.

### **The main points covered during the instruction may be summarized as follows:**

#### 1-Introduction to Photography

a- Uses

2-Photography as documentation of Conservation problems, remedies and results as part an ongoing program of inspection and maintenance and as part of a permanent record for future reference.

a- Development and use of photo logs as part of overall archive

b-Digital referencing and storage; backups

3-What Photography is- the physical process

4-Equipment needed and its use.

a-Digital photography- operation of camera and use of software

b-Standard photography-35mm, large and medium format photography-accessories-

5-How to photograph

a-Archaeological/ architectural conservation photography

b-Lighting considerations

c-Framing and composition

d-Use of scales and north arrows

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## Individual Student List

- 1-Abdalla, Hasan Abdalla Mohamed (Esna, Technician)
- 2-Ahmed, Nagat Youssef (Luxor-Technician)
- 3-Ahmed, Sahar Mohamed (Luxor-Technician)
- 4--Elias, Mary Megah (Luxor, Technician)
- 5-El Senusi, Rokia Hagag (Karnak-Technician)
- 6-Gayed, Manal Nasef (Mummification Museum-Conservator)
- 7-Gergius, Maryam Abd El Shahaed (Luxor, or Abou El Good Storeroom, Technician)
- 8-Hanna, Emad Faik (Luxor-Technician)
- 9-Hanna, Mounira Mouris (Abu El Guod Storeroom-Conservator)
- 10-Hassan, Saber Ibrahim (Esna-Technician)
- 11-Hussein, Abdel Rahim Qenawi (Esna, Conservator)
- 12-Hussein, Eltayeb abu El Haggag (West Bank-Technician)
- 13-Kader, Ashraf, Mohammed Kassim Abdel (Luxor-Technician)
- 14-Kodary, Eman Ahmed (Karnak-Technician)
- 15-Madny, Al Shazly Shaibi Al Hamed (Esna-Conservator)
- 16-Mahdy, Anwar Fouad (Luxor-Technician)
- 17-Mohammed, Randa Ahmed (Luxor-Technician)
- 18-Mohammed, Wafaa Abo El Hamed (Karnak-Technician)
- 19-Mostafa, Negm Elddin Said (Luxor, Technician)
- 20-Nashed, Amany Email (Luxor Museum-Conservator)
- 21-Afaf Farag Hassany (Karnak)

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22-Said, Saleh Salem (Luxor-Technician)

23-Saleh, Eman Mahmoud Abdallah (Karnak-Technician)

24-Tawfek, Eman Wasfy (West Bank-Conservator)

## **“Introduction to Masonry and Building Technology in Ancient Egypt” and “Modern Conservation and Restoration Intervention”**

**Instructor: Danny Roy**

This report describes the training course covering the subjects “Introduction to Masonry and Building Technology in Ancient Egypt” and “Modern Conservation and Restoration Intervention” that took place as a component of the ARCE Conservation Field School from January 26, 2008 to January 31, 2008.

There were twenty-five participants, as well as the heads of conservation for Karnak and Luxor temples (who were present to supervise the progression of their student conservators and technicians).

### **The main points covered in the course may be summarized as follows:**

#### **1 Team Members**

Supervisor: Dany Roy

Interpreter: Said Abd El Hamed

#### **2 Overview of the course**

The first section of the course “Introduction to Masonry and Building Technology in Ancient Egypt” was presented on three days as follows:

- 1- Stone catalogue
- 2- Ancient plans, measurement and site preparation
- 3- Stone and metal tools
- 4- Modern tools
- 5- Quarrying
- 6- Dressing and carving
- 7- Transportation and handling

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- 8- Mudbrick architecture
- 9- Stone architecture
- 10- Tomb, shafts and tunnels
- 11- Vases, vessels and beads

A full day was dedicated to the visit of the ancient sandstone quarries of Gebel Silsila (East and West banks). Ed Johnson and geologist Hany Hamroush participated in this field trip.

The second section of the course “Modern Conservation and Restoration Interventions” was also presented on three days and covered techniques and materials employed for the reconstruction / rebuilding of various architectural elements.

A half-day was dedicated to the visit of the Temple of Amun (Hatshepsut – Thutmosis III) located in Medinet Habu (West bank of Luxor). There, the students could observe and study the extensive restoration and conservation work accomplished by the University of Chicago team over the last 10 years. Conservators Lotfi Khaled and Adel Aziz, joined by restorer Frank Helmholz, presented the totality of the work they and I performed on the structure and its surroundings.

### **3 Teaching methodology**

The material was presented in the form of lectures translated into Arabic, with Said Abd El Hamed simultaneously translating. The lectures were accompanied and enhanced by Power Point projection of various techniques, materials and stone cutting and masonry methods and practices. The students were also given a thirty page document containing the essential techniques (in the form of pictures and drawings) of the ancient Egyptian builders.

### **4 Handouts and Related Material**

Copies of all handouts and related material have already been provided for attachment to this Final Report.

### **5 Evaluations of Students**

My teaching time in Luxor was only a week; this makes it hard to evaluate every student on an individual basis.

Overall, I can say that the vast majority of the students manifested great interest in the material presented. A lot of questions were asked and their motivation to thoroughly understand any given concept was obvious.

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Despite the time restriction, limiting the coverage of such a vast subject, most students were able to grasp the basics of ancient Egyptian building technology. I was adamant that they must read and research the subject on their own to attain a better understanding of the material presented.