

PROGRESS REPORT No2

December 1999-January 2000

“Documentation and Conservation of King Khasekhemwy’s Funerary Monument at Abydos”

David O’Connor, Matthew Douglas Adams

Egyptian Antiquities Project

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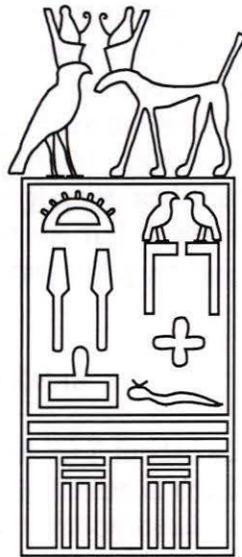
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DOCUMENTATION AND CONSERVATION OF PHARAOH KHASEKHEMWEY'S FUNERARY MONUMENT AT ABYDOS



Progress Report No. 2
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David O'Connor, Sub-project Director
Matthew Adams, Associate Sub-project Director

Institute of Fine Arts, New York University

Documentation and Conservation of Khasekhemwy's Funerary Monument at Abydos

Introduction

This report presents in greater detail than was given in Progress Report No. 1 the findings of important aspects of the December, 1999, - January, 2000, field season of the EAP sub-project "Documentation and Conservation of Pharaoh Khasekhemwy's Funerary Monument at Abydos." During this field season, Khasekhemwy's funerary enclosure, known as the Shunet el-Zebib, received the most intensive on-site examination ever given it or any comparable monument of its period. Understanding the nature and condition of the Shunet is important because it is the largest of the early surviving monuments from ancient Egypt, and because of its place in the history of royal funerary complexes. International Preservation Associates, Inc. (IPA), sub-contracted by the sub-project, has, in the view of the sub-project directors, done an extremely thorough job of examining and evaluating the monument, and the work of the IPA team has defined both the short- and long-term stabilization and conservation issues presented by the Shunet, as well as many important aspects of the original design and construction of the building. Attached as Appendices I, II, and III to this report are the detailed reports to the sub-project directors on the work of the IPA team. These consist, respectively, of the Architectural Documentation Report No. 1, the Final Structural Report, and the Mud Brick Conservation Field Report No. 1. An executive summary of the full three-volume report from IPA is contained in Volume 1, Architectural Documentation Report No. 1 (pp. ix-xii).

Documentation of the Shunet el-Zebib

As specified in the guidelines for all EAP funded sub-projects, the systematic, detailed, and complete documentation of the monument is crucial for the determination of its existing condition and structural and conservation needs, as well as for the understanding of its original design and construction. The team sub-contracted from International Preservation Associates, Inc., has initiated this task.

Volume 1 of the Preliminary Field Report No. 1 submitted to the sub-project directors by IPA and included as Appendix I, below, consists of the Architectural Documentation Report No. 1 by William C. S. Remsen. This report provides not only a consideration of the architecture of the monument as it may relate to its stabilization and conservation needs, but it constitutes the first systematic assessment ever carried out of the building's history, design, and construction.

Topics considered in Volume 1 include a discussion of the general setting as well as a physical description of the monument. Also reviewed in the report is the chronology of the Shunet, including a detailed consideration of the drift sand which has accumulated against a number of the walls, which represents a major aspect of and contributing factor to the monument's current condition. Specifically, the distribution of sand deposits relates directly to the preservation of original wall veneers, surface features such as pilasters and niching, and finishing plasters. Where sand dunes have been disturbed in modern times, the rate of decay of these features can be calculated, by comparing current conditions with what

Documentation and Conservation of Khasekhemwy's Funerary Monument at Abydos

is seen in records from past work at the site. The report also considers aspects of the original design and construction sequence of the Shunet, including its relationship to other early monuments and its place in the history of Egyptian monumental architecture. Lastly, Remsen provides a very detailed review of the nature of the monument's mudbrick masonry.

Short and Long-Term Needs of the Shunet el-Zebib

Consideration of the risk factors which affect the Shunet is given throughout all three appended volumes, but is the primary focus of Volumes 2, the Final Structural Report, by Conor Power, and 3, the Mud Brick Conservation Field Report no. 1, by Anthony Crosby. Both short- and long-term stabilization and conservation needs of the Shunet have been identified. In the short term, substantial steps must be taken in the very near future to ensure that no catastrophic events occur which would not only seriously damage the remaining structure of the Shunet, but which would also pose a real danger to any personnel working there. In Fall, 2000, the sub-project directors will begin the purchase and preparation of the materials and arrangements for the short-term stabilization measures required. The implementation of these short-term measures will be initiated in Spring, 2001. Thereafter, permanent stabilization and conservation procedures will be begun, closely coordinated with the necessary excavation operations.

The short-term stabilization of the structure will decrease the immediate risk to both the monument and personnel on-site, which will permit the completion of the documentation of the Shunet, involving both archaeological and architectural work, as well as the initiation of measures to mitigate the factors working against the long-term survival of the monument. The sub-project directors are currently awaiting the technical specifications for these measures from the IPA team, which are now in preparation. As might be expected, the detailed assessment of the Shunet el-Zebib has revealed that its conservation and stabilization needs are more complex and more extensive than was originally anticipated, although meeting those needs is achievable. A review of the technical specifications will permit the determination of how much of the costs involved can be covered by currently allotted funds and how much will require additional funding.

Short-Term Emergency Measures

The most critical structural and conservation issues identified at the Shunet by the International Preservation Associates team, and detailed in the appended reports, consist of major structural failures. These pose an immediate danger to the integrity of the structure of the Shunet. The structural failures result from a combination of (i) the localized removal of substantial portions of the interior fabric of the walls by the creation of monastic cells, (ii) widespread undermining of the walls by animal burrows, (iii) the employment at the time of construction of stacked header bricks in the core of the walls, which has led to vertical weakness and cracking, (iv) the collapse of unrestrained wall ends, which relate to

Documentation and Conservation of Khasekhemwy's Funerary Monument at Abydos

cracking stemming from iii and v, (v) weathering from wind and rain, which exacerbate and accelerate structural failures, and (vi) massive mud hornet nests on areas of overhanging brickwork, which collapse and pull substantial sections of brickwork with them.

Immediate structural risks can be lowered in the short term by the installation of shoring, bracing, and buttressing in a number of areas, as discussed in both Volumes 2 and 3 of the attached report. This will permit more detailed documentation and evaluation of the condition of the structure, and additional planning for measures to mitigate threats to the Shunet over the long-term. Areas of highest risk are identified in Volume 2 (Final Structural Report) and Volume 3 (Mud Brick Conservation Field Report no. 1) as having "urgent" and "emergency" priority.

Long-Term Stabilization and Conservation Measures

The goal of this sub-project is the permanent stabilization and conservation of the Shunet. The long-term risks overlap with the structural issues already noted for the monument, but with the addition of two other major factors. Weathering from wind and rainfall continuously removes original fabric from the monument, contributing to structural weaknesses and exacerbating any defect. The mud hornet nests also represent a major source of loss of original fabric from the monument. In addition to those areas where the nests contribute to structural weakness, in many areas extensive and continuous nest-building systematically removes layers of bricks from the surfaces of the walls. A number of other observed or potential processes of decay and damage affecting the monument are noted in the attached reports.

It seems likely that the best long-term solution to many of the problems observed at the Shunet will be the addition of new brickwork. This will be used to buttress unrestrained wall ends, to fill in voids and undermining, and to tie together areas of brickwork which have become separated through cracking or weathering. In a setting such as Abydos, the creation of appropriately sized and composed new bricks and the addition of mudbricks to the structure is achievable. Planning for the implementation of these measures is dependent upon receiving the technical specifications currently being developed by International Preservation Associates. Upon receipt of these specifications, it will be possible to budget and prepare a detailed plan of work.

It is clear that the archaeological and architectural components of the sub-project will have to be closely coordinated. In many areas of the Shunet, architectural documentation and final evaluation of the stabilization and conservation needs of structure cannot be accomplished without archaeological work to reveal parts of the walls which are currently buried. In certain areas, the necessary archaeological work cannot be undertaken until major structural and safety issues are addressed, while in others it is anticipated that stabilization and conservation measures will need to be implemented during and immediately following exposure through excavation. This situation will require some revision of the excavation schedule originally envisaged in the proposal to EAP.

Documentation and Conservation of Khasekhemwy's Funerary Monument at Abydos

Conclusion

The three volumes appended here identify in depth the serious condition problems of the funerary enclosure of Khasekhemwy and also sketch the procedures that will save this unique monument. These procedures are to be developed in detail in a subsequent report. In addition, the IPA reports represent the first installment of the systematic and detailed documentation of the monument. This documentation provides not only the basic record necessary prior to stabilization and conservation work, but also the first detailed consideration of the design and construction of the Shunet, itself a major contribution to knowledge.

As noted in appended Volume 1, the Architectural Documentation Report no. 1, the extent and complexity of the needs of the Shunet are greater than could have been anticipated prior to first-hand and detailed observation of the monument. The sub-project directors and the sponsoring institutions (Institute of Fine Arts, New York University; University of Pennsylvania Museum; Yale University) are committed, however, to achieving the goals of stabilizing the Shunet and doing what is necessary to ensure its long-term survival.