

Field Report on the 2000 and 2001 Seasons at Amheida

The Dakhleh Oasis in Egypt's Western Desert offers an extraordinary opportunity for numerous scholars at Columbia University and at other institutions abroad in terms of research and training. Since 2000 a large interdisciplinary archaeological project has focussed on a settlement site known today as Amheida. There are substantial above ground remains at Amheida and surface pottery scattered across the urban core with dates ranging from pharaonic, Ptolemaic, Roman to Late Antique periods. We believe Amheida to be the Roman city of Trimithis and, according to literary sources, this was also the location of a Roman military garrison. However, the site may have had substantial occupation pre-dating Roman settlement, as the surrounding landscape suggests. In the immediate environs there is also evidence of prehistoric lithic scatters, an Old Kingdom site and several cemeteries, and Islamic settlements. We are integrating these different sites and landscapes into the larger project by complementing excavation with an intensive fieldwalking survey. Our project affords a unique opportunity to examine urban life in Egypt, rarely possible in the Valley due to the impact of the Nile's movement. It allows us to examine the settlement site through many centuries in relation to the wider landscape setting and the Oasis in general. To date, there is no single archaeological project in Egypt involving the investigation of a site and its landscape with comparable time span that is carried out to the highest standards of modern archaeology.

This year marked the second preliminary season at Amheida, bringing together a team of experts from the United Kingdom and the United States from December 30th to January 13th. We would like to thank the Supreme Council of Antiquities for making our work possible, the Inspectorate in Dakhla and Kharga and our site inspectors Magdy Ebrahim Mohamed and Ahmed Shazily. Our work was carried out under the auspices of the Dakhla Oasis Project and we would like to thank Mr. Tony Mills for his assistance.

Although difficult to define as a bounded site, Amheida comprises a substantial urban centre with standing remains dating to the Roman Period, plus a series of mud brick tombs to the south dating to Ptolemaic and Roman times. Given the evidence for extensive land-use surrounding the site for lithic exploitation, farming and burial, the project seeks to expand on traditional notions of the site and re-embed various forms of settlement, subsistence, social practice within

the wider landscape. In 2000 we identified and mapped three very different sectors of the urban site: Area 1 is primarily domestic and industrial, Area 2 has vaulted and domed structures that are elaborately painted and Area 3 has an impressive 'pyramidal' structure that is surrounded by vaulted tombs. Over the 2000 and 2001 seasons Jim Knudstad has mapped and drawn these areas, allowing us to envisage the complex architectural stages and possible superstructures. We have chosen to concentrate on Area 1 for both mapping and excavation since it has a rich variety of architectural types and activity areas. At present there are no plans to excavate human remains or mortuary structures on site, for example, those represented in Area 3. Given the importance of conservation and planning at Amheida, we also felt that Area 2 presents significant concerns given the extensive painted rooms in this sector of the site.

In the 2001 season the main aims were to create a base map of the total site, survey more completely Area 1 and develop strategies for intensive survey, surface collection, excavation and conservation. The field survey component of the project was led by Dr Michael Given with the assistance of Angus Graham and Aziz Meshia. In 2001 a complete map of the settlement will be produced by Dr Roelof Versteeg and his team using remote sensing and GPS technologies. This simultaneously gives us a contour map as well as a reading of subsurface structures and features. This season a map of the site was developed using a Global Positioning System (GPS), specifically recording standing remains, prominent archaeological features and in situ finds throughout the site and immediate environs. As detailed on our interactive map, each feature was given a position, photographed and specific notes recorded. With the help of the ceramic specialist, Dr Sally-Ann Ashton, a sampling strategy was developed for surface materials that integrates with the settlement site excavation.

In trying to integrate different relationships with the landscape over time, we have identified a series of levels from which to analyse human activity, including an urban core, mortuary zone and a more extensive area of field systems and farmsteads. The UTM grid will be our standard unit of measurement, linking on-site and off-site features and making our work comprehensible to scholars who need only have access to a standard map of Egypt. The fieldwalking component of the project will examine long term settlement patterns, resource procurement, human exploitation of the landscape and geomorphological processes that are specific to an

Oasian environment. Our colleagues at Biosphere, who specialise in ancient and modern environments, including flora and fauna, will be on hand for researchers and students alike. Such studies may shed light on population dynamics in Dakhleh as well as symbolic, culturally grounded perceptions of the landscape from prehistoric times to the contemporary period. There are no temporal parameters with the current project and we plan to have ethnographers included in our team from 2002 onwards.

A major priority this season was to record Area 1 more extensively. We used a dedicated total station to systematically record a series of structures in two sectors of Area 1, which will then be modelled using a CAD program. Complete mapping is crucial before full-scale excavation takes place in 2002. A series of buildings in the eastern portion of Area 1 were drawn in detail by Knudstad. Our conservators examined these areas, made drawings of exposed mud brick and developed plans for the conservation component of the project. Surface sampling was undertaken with ceramics and small finds being recorded by Ashton on a room by room basis (see below). A similar methodology was adopted in the western sector where we plan to excavate an impressive multi-story building with brick piers and decorated plaster.

Four test pits in the eastern sector of Area 1 were also initiated by Dr Jonathan Last and Angus Graham to determine the density of ceramic materials, the complexity of the stratigraphy and the feasibility of maintaining baulks during excavation. Clear stratigraphy was evident and the results were extremely helpful in determining excavation strategies. The precise location of each square was recorded using the Total Station: they were recorded in detail and later backfilled (see below). Last and Graham ascertained the number of sherds present on the surface and at regular intervals while excavating, giving us a better sense of the density of ceramics we will encounter next season when excavation begins in full. These were later weighed and examined in detail by Ashton.

At Amheida, the huge number of surface sherds on the urban part of the site is the most striking feature. A rough calculation using the numbers derived from our test squares suggests we might be dealing with something like 320 million surface sherds throughout the settlement site alone. While this figure remains abstract, it does give a sobering view of the task ahead of us.

Archaeologists working in Egypt often disregard or fail to record surface materials, explained in terms of deflated surfaces and major long term disturbance. To some extent this may be correct, however: numerous walking surveys of the site already suggest that surface finds indicate the general character of specific areas within the city such as industrial debris, vitrified materials from ceramic production, higher concentrations of carved stone and changes in ceramic variability. We plan to record surface finds in detail throughout Area 1 and any other sectors where excavation takes place, as well as during the intensive fieldwalking program. Both excavation and survey recording systems are integrated and allow cross-referencing and analysis. Rigorous excavation of structures at the site, rather than hastily removing what has traditionally been thought of as 'fill', also affords us information about site formation processes and can potentially answer questions about site abandonment, building histories and the time scales involved. It will also be crucial in providing secure data for spatial analysis, enabling us to determine what sort of activities were happening in certain buildings and their social implications. At present so little is known about ancient Trimithis that these detailed methodologies offer our best means of accessing the biographies of ancient buildings, spaces and their inhabitants.

Aside from our focus on excavation and survey, there has been a substantive concern with site conservation and maintenance. Given the impressive standing architecture and extensive use of wall painting throughout the site, strategic assessment and planning must be incorporated. Two conservators have been involved in the project from the outset, Pamela Jerome and James Conlon from the Columbia Graduate School of Architecture, Preservation and Planning. Both specialists were on hand to assess the potential excavation areas and the condition of many of the standing buildings, especially those where plaster and paint were evident. At least one conservator will be present at all times throughout the excavation season and at the season's end excavated structures will be backfilled for protection. Two weeks were spent collecting and analysing data and developing a conservation plan for future seasons (see below). In future seasons the team will include specialists with expertise in small finds and figurative plaster. Our commitment to preservation has led us to collaborate with partners in Computer Science and the Lamont Doherty Earth Observatory to develop non-invasive techniques for site

investigation, recording and preservation. This is currently being pursued through an application to the National Science Foundation.

Digital media has also been an integral component of the project from the outset, directed largely through our collaboration with the Media Center for Art History, Archaeology and Historic Preservation at Columbia University. Staff at the center have developed the web page and an image database, and are engaged designing site databases with on-line access to be used in pedagogical projects and community outreach: GIS and CAD programs, digital photography and video are now essential media technologies. Because Amheida offers such rich and varied archaeological materials we believe these should be made available as an on-line resource for students, researchers and various publics—in Egypt and elsewhere. At Columbia University we are currently developing a larger media component for the project which will be presented on the web in both Arabic and English, supported by a generous ISERP grant. Timely dissemination of our findings is, furthermore, a disciplinary and ethical responsibility.

We have planned a combined excavation and undergraduate semester in Egypt to be based in Dakhleh and carried out over a long period. Students will spend six weeks on site undertaking fieldwork and taking courses in history, archaeology and archaeological science. They will then have two weeks of visiting museums and sites around Egypt, and two weeks of intensive independent project work in libraries in Cairo. Specialists drawn from around the world will both study the finds for publication and take part in the instructional program. Our project is generously supported by an AQF grant (\$373, 861) and ISERP grant (\$15,000) from Columbia University.

We also intend to make this project a model of involving the local population, not only through employment as on-site laborers but also through conservation training and educational programs accessible to an arabophone audience. We will develop a local museum for our finds in the final stages of excavation as well as a detailed program of archaeological interpretation on site. This landmark project will develop attractive opportunities to provide an environmentally sound balance between Egyptian desires to develop tourism in the oases and the difficulties of conserving a world heritage site.

