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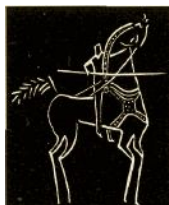
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CBRL 2003

Newsletter of the Council for British Research in the Levant

From the Chairman

I am happy to report another busy, productive and successful year for the CBRL. And I am even happier to report that this view of our activities was fully endorsed by the delegation from the Board for Academy Sponsored Institutes and Societies, who visited Jordan and Syria in August 2002 to look at our work on the ground. Our two assessors, Prof Nicholas Postgate and Dr Caroline Malone, were accompanied by the new Chair, Prof Wendy Davies, and by the Secretary of the British Academy, Mr P W H Brown. So we really do have the good housekeeping seal of approval.

The past year has also been one of significant change on the management side. Most importantly, we have moved our UK office into the British Academy itself. The final contribution to our work by our outgoing Secretary, Christine Holder, was to organise the transfer of our office and all our impedimenta from St Peter's College, Oxford, to London. Our new Secretary is Penny McParlin who has made an impressive start in getting our office up and running in its new home. Our new Honorary Secretary Prof Denys Pringle, who is Professorial Fellow and Director of Research at the School of History and Archaeology at Cardiff University (and is a former Assistant Director of the BSAJ), has made an equally impressive start in re-ordering the conduct of our affairs. We also welcomed five new staff members in Amman and Jerusalem, as Bill relates below.

This autumn Denys Pringle and Bill Finlayson accompanied me on a formal visit to Lebanon, Syria, Jordan and Palestine. This visit was intended to reinforce the CBRL's activities in four of our major areas of work, to introduce the new Honorary Secretary to the competent local authorities; and

to meet with all our new staff appointees in Amman and Jerusalem (all of whom are settling in well),

In Lebanon we were able to formalise the CBRL's position and activities with the host government and to arrange with the British Council to act as our representative office in Beirut. In Syria we established the extent to which the CBRL will need to take account of the new government's policy and priorities. We also secured agreement to the holding of a conference to be held in Aleppo in autumn 2003 on Islamic Military Fortifications. This is being put together by Hugh Kennedy and promises to be an exciting mixture of formal papers at the Aleppo Citadel and organised visits to sites of particular interest. We also hope to make it possible to add on visits to other sites of interest in Syria. So I hope that many CBRL members will be tempted to join us in Aleppo next September,

In Jordan we reviewed arrangements for the new CBRL building into which we are moving in early 2003, and for a programme of celebrations to mark 25 years of British archaeological activity under BIAAH and CBRL auspices. In Jerusalem we reviewed how best to re-launch CBRL activities under our new Research Officer, and we were given reassurances from the British Consul General on further financial and other support,

So another busy year lies ahead. In conclusion I am as always delighted to have this opportunity to thank the CBRL's officers, members of our Committee, and our UK and overseas staff for all their hard work and commitment over the last year,

Adrian Sindall

From the Director

When I first started working for the CBRL it seemed unfortunate that so many other staff either started at the same time as me, or shortly afterwards. I now realise that this is to some extent the norm for an organisation where most people are on fixed term contracts, somewhere near the beginning of their careers. 2002 has seen another major change in personnel.

In Amman this process began with Alex Wasse's decision to leave Jordan so that he could be with Jo Clarke (former Jerusalem Officer) and their new baby. Alex left early in the year, and was not replaced until September. Andrew Petersen has taken over, not as Assistant Director, but as Amman Research Officer. This change of job title reflects the process that we began with Alex; to make the post a far more research-oriented one at a postdoctoral level. Alex completed his PhD a few months after starting. Andrew managed to complete and submit before coming out, and at the time of writing has just returned from a successful *viva voce*.

Both our postgraduate scholars, Charlotte Schriwer and Samantha Dennis, came to the end of their two year contracts in 2002. They were to some extent guinea pigs for

another attempt to increase the formal research aspects of the former Librarian and Computer Officer posts. We are delighted that both were highly successful, giving papers at conferences and producing articles for publication. Charlotte has now gone on to start a PhD at the university of St Andrews, while Samantha will be starting a PhD at Edinburgh University after completing a few months' illustration work for the Wadi Faynan project. They were replaced in September by John Harte and Tobias Richter, who will be following the pattern they established.

A similar process has occurred in Jerusalem. Here Naomi Nobel, who had successfully overseen the renovation of the former BSAJ thanks to a substantial Foreign Office grant, left the CBRL in January. She was replaced by Brian Pitman, who kept the office running until September. We are extremely grateful to both of them for keeping things running single-handed and through difficult times. In September we finally established a new research post in Jerusalem when we appointed Matthew Elliot as our new Jerusalem Research Officer. The addition of the word Research to Jo Clarke's old job title is deliberate, and reflects our intention to make sure this post, like its equivalent in

Amman, is a research-oriented post-doctoral position. To help this become a reality we have also appointed a Jerusalem Scholar, Elaine Myers, on the same basis as the two Scholars in Amman.

Finally, in the UK, Christine Holder left the CBRL in advance of marrying. She has been replaced by Penny McParlin. Christine's last task was to move the office to the British Academy in London. This was a long-term aim, and will be enormously helpful to the administration of the CBRL.

As if all this change were not enough, during the course of 2002 we decided that there were substantial benefits to be gained by moving the Amman research centre. This process has now begun, and will be completed in early 2003. This, combined with all the normal CBRL business and trying to

conduct my own research, has obviously led to yet another busy year. This, too, is obviously the norm for the CBRL Director. It has been an extremely good year. We managed another very successful season excavating at Dhra'. I attended the 3 ICAANE conference in Paris, which was a useful and enjoyable occasion,

Post-excavation work on the excavations and associated survey at Wadi Faynan 16 is going well, and we hope to submit for publication during 2003. Along with Samantha Dennis and Mohammad Najjar, I continued conservation work at Beidha. And finally, although I still see more of the insides of airports than anyone might wish, I only had two nights spent by surprise in airport hotels, and my suitcase only vanished once!

Bill Finlayson

News from Jordan

The main task on everybody's mind at present is the move to a new building. It became clear to us during the course of 2002 that the financial advantages in moving were great, and that we could take advantage of this to move to a location that would solve a number of complaints about the current institution. We are not moving far. The new location is close to the first British Institute, close to the German Institute and to ACOR, and opposite the Jordan University. It should be much easier for first-time visitors to find! This time we will not be sharing the building with anyone else, which will give us a greater degree of flexibility.

The building is a new one, with a basement and four floors. The ground floor will contain the administration offices and research space, the first floor the library, the second floor the hostel, and the third floor the Director's flat. The two scholars will both benefit as they will each have one of the rooms designed as a master bedroom, one on the library floor and one on the hostel floor. This gives them their own bathroom and small balcony. This should make life much more comfortable for their two-year stints in Amman. The return of the Director to the building seemed sensible in terms of cost benefit, and I hope not to be cursed by future directors as it is a very nice flat. We are taking advantage of the move to upgrade finally the computer network and internet access throughout the building. In light of the developments over the last year and a half we are also improving security arrangements.

Changes have also been happening in Wadi Faynan. The old camp, used and visited by many CBRL members and their teams, is no more. The Royal Society for the Conservation of Nature has commenced a major building programme in the camp. They are building a small hotel, and many of the old huts and camping areas are now gone. We will still have the old research space and kitchen, as well as use of a building erected as the living quarters of the construction team.

Our main academic event in Amman this year, *The First International Conference on Conservation and Regeneration of Traditional Urban Centers in the Islamic World* held jointly with the Jordan University of Science and Technology and the Abdul Hameed Shoman Foundation, was a great success.

Plans for publication are moving fairly slowly, but are still moving. The change in research staff in the Amman office is clearly going to lead to all sorts of exciting new directions, but we hope to see the old staff back on their research missions too. Indeed, Charlotte Schriwer will be back sooner than expected, as she is providing coverage for Nadja Qaisi who will be on maternity leave from mid-February 2003.

Bill Finlayson

New Research Scholar: John Harte

My undergraduate years were for the most part spent at Clare College in Cambridge, where I studied history. Graduating in 2001, I swiftly committed financial suicide by moving to London for a year, during which time I joined the Medieval Studies MA course at Birkbeck College. After twelve months of traffic jams and tube strikes, my first few weeks in Jordan as a CBRL Research Scholar and librarian have come as a very welcome change,

I am pursuing academic interests which centre around settlement and acculturation, and in particular on the socio-cultural implications of the Crusader settlements in the Near East. One particularly badly-neglected area of research has been the Latin principality at Antioch: my first project here at the CBRL will involve a close examination of Frankish settlement in the region, and the various processes of cultural conflict and exchange to which it gave rise.

New Research Scholar: Tobias Richter

I joined CBRL Amman as a Research Scholar at the beginning of September 2002, and took over the job of computer officer from Samantha Dennis at the end of a month long induction period. I studied archaeology at the University of Wales, Lampeter, where I became interested in the prehistory of the Levant. After joining the German team working at Göbekli Tepe last year I realized that I wanted to continue working in the Levant. I am happy that the CBRL has given me the chance to do exactly that.

My appointment here is also concerned with research, and as a prehistorian I am mainly interested in the archaeology

of hunter-gatherer and early farming communities, archaeological theory and landscape archaeology. My main research work here concentrates on the analysis of several lithic assemblages of the Natufian period (c. 12,500-10,500 BP). I plan to develop ideas about current methodologies and interpretations in the study of these assemblages. This

work will be based on the premise that chipped stone tool technology and form are deeply embedded within social relations of past groups and individuals. This involves the development of a detailed analytical methodology, which can be used to shed light on the social relations embedded within technologies.

News from Britain

UK Administrative Secretary: Penny McParlin

My background is in arts administration and management information, as well as Classics and Archaeology. I took up my role as UK Secretary after working at the School of Oriental and African Studies, and previous to that with the Arts and Humanities Research Board. My MPhil on the Asclepius cult in Asia Minor at the University of Swansea gave me the opportunity to undertake research in Turkey. Based in Ankara, I worked on epigraphy and several archaeological survey projects. Later I joined the staff of the British Institute of Archaeology at Ankara for two years, before returning to the UK.

My arrival in this post coincided with the move of our UK office to the British Academy in London, so it was all change! The first few months were very hectic, not only for myself in a new role, but also for the CBRL as interviews for several posts in our offices in Amman and Jerusalem had to be arranged and appointments made. A trip to the offices in Amman and Jerusalem is planned for the forthcoming year. I have been made to feel very welcome by staff, trustees and members alike, and am very much looking forward to developing my role within the CBRL.

Penny McParlin's contact details are on the back page.

News from Jerusalem

Since September 2002 we have held five public lectures, followed by receptions, which have attracted substantial audiences of foreign academics, Israelis and Palestinians. In the spring we will also institute a series of fortnightly seminars. Other plans include musical and artistic events to be held in conjunction with the British Council, and we are planning to redesign the garden so it can be used for outdoor events. The British Council is funding both this and a scheme to buy more reference books for the library and to preserve and display its rare books.

Matthew Elliot

News from Syria

The British Council in Damascus (under the direction of Mr Patrick Brazier) continue to provide the CBRL with excellent help and support. The staff member on the CBRL 'desk' in Damascus is now Ms Leila Hourani. The house in Horns that we acquired as a field base in 2000-2001 was well used by three separate CBRL-sponsored projects. Dr Abdal-Razzaq Moaz, who was the Director-General of the DGAM, has now been promoted to be Deputy Minister of Culture with responsibility for antiquities, and Dr Jamal al-Ahmar has been made Director General of Antiquities. They work together closely, and have emphasised that they will continue to limit the number of new excavation permits, except in cases where there is a threat to a site, or a conservation benefit to be gained from excavation. Survey work continues to be welcome. The DGAM's priority continues to be for development of museums and the conservation of sites and objects. To this end they are seeking opportunities for training their staff in aspects of conservation.

News from Cyprus

The Cyprus American Archaeological Research Institute has had another good year, with the hostel nearly full, the library well frequented and an active programme, whose highlight was the annual summer workshop on 6 July 2002. With the slowing down in discretionary excavation under pressure from the Department of Antiquities in Cyprus to publish, reports to the workshop are increasingly concerned with rescue digs and the processing and interpretation of finds. There has also been a noticeable widening in the chronological range and historical focus of fieldwork, with much more interest being shown than previously in the Mediaeval period.

In 2003 CAARI will celebrate the 25th anniversary of its creation. The main event will be the international conference organised jointly by CAARI and the Archaeological Research Unit of the University of Cyprus on 'Egypt and Cyprus in Antiquity'. This conference, has attracted 50 speakers from around the world and will take place in Nicosia from 3-6 April 2003. Further details can be obtained from Vasiliki Demetriou at vasiliki@ucy.ac.cy.

Robert Merrillees

News from Lebanon

2001-2002 saw a substantial increase in CBRL grant aid to projects working in Lebanon, with funding for Dr Alex Wasse's Anti-Lebanon Archaeological Project and for Dr Dominic Perring's post-excavation work on the Beirut Excavations Project. Dr Garrard and Dr Wasse have been working respectively with Corine Yazbeck and Maya Haidar-Boustan of the Musée de Préhistoire Libanaise, Université Saint-Joseph. Following a visit to Beirut by Adrian Sindall, Denys Pringle and Bill Finlayson, we hope to be setting up an arrangement with the British Council there, similar to that operating in Damascus.

Aerial Archaeology in Jordan

David Kennedy (*University of Western Australia*) and Robert Bewley (*English Heritage*)

The Beginnings

The Middle East, along with Britain, was one of the two areas in which aerial archaeology was pioneered during and following World War I. The German Air Force operating with the Ottoman forces in 1917-18 took thousands of aerial photographs, and a significant number were of ancient sites or of landscapes of interest to archaeologists. British and Australian pilots took some in the same area but made less impact. Next came Père Antoine Poidebard, starting in the 1920s. Even today, two generations later, the stunning aerial photographs taken from biplanes of the French Air Force in Syria still strike the viewer forcefully and remain as evocative now as they did in the 1930s. Of course, Poidebard was not the only aerial archaeologist in the Middle East, but his work is outstanding and his endeavours went far beyond merely taking photographs of sites and features to understanding the technique and applying the results of his overall findings to the solution of specific problems — most notably the Roman Limes and settlement within the steppe.

In 1938, Sir Aurel Stein, operating with the support of the RAF, shifted his Central Asian interests to the Middle East and after two seasons in Iraq (1938-1939) moved to Jordan for several, very hurried weeks. Most of his findings were unpublished at the time of his death but the typescript of his book and many of his surviving air photographs were finally published in 1985. Despite the significance of their contribution, in Syria, Iraq and Jordan — or Palestine and Israel for that matter — the work of these pioneers was only a beginning.

All such work ended in the 1940s with the emergence of independent countries in the region. Sporadic flying has taken place in the region, not least three seasons of systematic flying by Derrick Riley with Ben Isaac and Mordechai Gichon in Israel in 1990-92. That remains largely unpublished and ended with Riley's death.

In 1980 the Royal Jordanian Geographic Centre — as it is now called — provided David Kennedy with diapositive copies of the entire 4000+ frames of the Hunting Aerial Survey of western Jordan in 1953. It was an extraordinary gesture and bore significant fruit. Systematic interpretation funded by the Australian Research Council in the early 1990s revealed over 25,000 sites — triple the number then known to the Jordan Antiquities Database (JADIS). Throughout this twenty years David Kennedy regularly looked for opportunities to be allowed to carry out systematic new flying explicitly for archaeology.

This became possible thanks to a combination of people and timing. We had the support of (then) Crown Prince Hassan, Alison McQuitty at CBRL, Tricia Salti in Amman and Wing Commander Michael Sedman at the British Embassy there. At that point Brigadier General Prince Feisal, now commander of the RJAF and frequently Regent while his Highness King Abdullah is abroad, was commanding the Air Lift Wing at Marka. The outcome was a long flight in a military Huey helicopter to explore the potential. It was

apparent further flights might be possible, and Robert Bewley joined the project. Between us we had with the country and its history and archaeology but limited practical experience of flying anywhere (DK), and twenty years of professional aerial archaeology in Britain and a keen interest in the Middle East (RB).



The authors at Marka in 2002 with the Huey helicopter and crew of the RJAF (APA2002.2/ CP20.20A (RHB), 2 October 2002)

apparent further flights might be possible, and Robert Bewley joined the project. Between us we had

with the country and its history and archaeology but limited practical experience of flying anywhere (DK), and twenty years of professional aerial archaeology in Britain and a keen interest in the Middle East (RB).

Objectives

Everywhere it has been applied, aerial archaeology has proved an immensely cost-effective and successful tool for the discovery of archaeological sites. In Britain and those parts of north-western Europe where it has been applied extensively and intensively over many years, tens of thousands of new sites have been recorded. The result has been to transform the map of every period in history and 'people' in the landscape in a way not previously possible.

Aerial survey for archaeology is undergoing a renaissance in Europe as the technique's advantages over other forms of survey are being recognised,

Aerial survey records archaeological sites as part of a wider network within the landscape, articulated by their intervening roads, tracks and field systems. The technique is a medium for rapid recording and mapping, and it is a highly efficient and cost-effective way of monitoring vulnerable areas. Agricultural development in particular can cause incremental damage not easily detected or evaluated at ground level. More dramatically, the use of the bulldozer for land clearance — common in Jordan — is a terrifyingly effective agent of

Aerial Survey in Jordan

In approaching our flying in Jordan we had all of these things in mind, and they will each be illustrated below. However, the opportunity was an uncertain one. In 1997 we were not to know that was to be the first of seven seasons of flying. Even now, each season is approached as a single operation, as we cannot be assured of a subsequent one. Our objectives in 1998 were, therefore, tailored to the possibility that no longer-term flying would be possible. For 1998 we identified as our central objective the photographing of some 200 sites. The selection was based on the need to record sites of every period, in every part of the country, and in every major geographical and environmental zone.

More than that, the sites were to be those which were visually striking. The primary objective was to gather material for a book — *Ancient Jordan from the Air*. The book will inevitably include the well-known sites — Petra and Jerash — but will go much further. If Jordan is renowned for Petra, its cultural heritage beyond Petra is barely known outside the world of scholarship and a handful of interested amateurs. Yet, as anyone familiar with the country knows, and as interpretation of the Hunting vertical survey had reinforced and illustrated, the country is thickly strewn with the traces of the past, often in a remarkably good state of preservation. The book would illustrate to a wider audience the immense richness of Jordan's cultural heritage through the medium of a view that is not only novel but particularly striking and evocative.

Results

In each year since 1998 we have photographed further sites for this book, though that has become just one part of a wider programme. In 1999 and 2001, flying was directed to two much more limited areas. In 1999 it was the Jerash Basin, essentially the broad area from Ajlun to beyond Rihab in the east and from Tell Husn south to Sweileh. The objective was to look at known sites of all kinds and to search for new ones. Especially important was the ability to combine ground information and discoveries made on the 1953 Hunting photographs with a new search. The region has been extensively developed for agriculture, not least in the last 20 years. It was often difficult to locate known sites in a changed landscape but 'seeing' them alongside the usually brief descriptions of Glueck or Mittmann 25 or 50 years ago was highly revealing.

Glueck, for example, described Khatlah as 'a small abandoned modern village'. Though Mittmann and Hanbury-Tenison added references to pottery, churches and other buildings, only with the aerial view could one grasp the location, scale



Roman mausoleum, reservoir, quarries and farm near Khirbet Ain (APA2002.2/ SL19.11, 29 September 2002)

and distribution of ruins. Even more telling was Khirbet Ain. The brief references were baffling and quite failed to reveal the extent of the ruins, or that the so-called 'monastery' on a hilltop is probably a small Hellenistic and Roman fort. Almost every visitor missed the large mausoleum south of the village with its nearby farm.

Then there are the new sites. Examples include the small fortified post or farm beside what seems to be a stretch of Roman road 3 km southeast of Jerash, and the scatter of much more ancient tracks on the hillsides east of Jerash which may in some cases go back to the Bronze Age. Mapping on the ground is difficult and the tracks often hard to see; from the air they can be seen and plotted. Jerash itself was an irresistible target every year — not least the most recent season when a ground fire over a large part of the site had exposed foundation walls normally obscured by vegetation.

In the area south of Amman many sites photographed in 2001 were already known. The landscape is far less developed than around Jerash, however, and the numerous towers seen on the hills around the Wadi Mujib became a baffling catalogue. Very well known was Khirbet Mdeinet Aliya reported and drawn by Glueck and again examined by Maxwell Miller. The air photograph brings out superbly the form and location.

In 1998 we had 33.25 hours of flying in Hueys and twin-engined Super Pumas into every part of the country — only a few sensitive border areas were excluded. Since then we have flown annually in various aircraft, for different lengths of time and in differing areas and taken several thousand photographs in various formats — colour slide, colour print, black and white, medium format.

Year	Hours	Region	Aircraft
1997	2 hr 20 min	'Desert Castles' area between Amman and Azraq Oasis	Huey
1998	33 hr 15 min	Every region in Jordan except the furthest panhandle and the southeast	Huey and Super Puma
1999	9hr 51 min	Northwest Jordan	Huey
2000	6 hr 54 min	Jerash area and Petra area	Islander
2001	10 hr 50 min	'Training Area' between Amman, Siwaqa and Dhiban	Cessna 150
2002	17 hr 36 min	Northwest Jordan, 'Desert Castles' area, Central Jordan as far as Ma'an	Huey
TOTAL	78 hr 26 min		

Flying in Jordan, 1997–2002

All the photographs have been catalogued (see website below) and the authors are very grateful to Francesca Radcliffe for her great efforts in locating the sites which have been photographed.



El-Hammam, Ma'an: the outline of the reservoir, Islamic residence (qasr) and other ruins are clear still in 1998 (APA98/SL18.32, 14 May 1998)

In pursuing our objectives, we were motivated by a recognition that archaeology in Jordan has to be for more than a tiny band of native and foreign archaeologists. Cultural heritage in western, developed countries can be big business. The wide popularity of archaeology is reflected in the proliferation of books, magazines, media reports and TV series and documentaries. In Britain, 'Time Team' and 'Meet the Ancestors' cater for a wide audience, and provide powerful underpinning for the serious professional business of archaeology through favourable legislation, developer finance, opportunities for investigation and community interest and support. Archaeology also provides significant employment opportunities in the management of sites and foreign currency earnings through international tourism. In Jordan, a country with limited natural resources, tourism is already a major source of income and potentially huge. It is presently limited not just by the continual instability of the region but by a false perception that there is little more of interest beyond a brief foray to Petra, Jerash and the Crusader castles.

Ancient Jordan from the Air will set out graphically and evocatively the enormous richness of Jordan's cultural heritage. Beyond advertising, however, it is hoped it will play a role in stimulating more interest and concern in Jordan for its cultural heritage. This is not amongst Jordanian archaeologists, who need no persuading, but amongst the wider public whose attitudes and everyday conduct will determine so much of how archaeology fares in the coming years. Rami Khouri's delightful publications, his articles and radio work and the superb books of Jane Taylor have all been highly important developments. But there is still a long way to go and we hope our book will play a part. More tourist interest is important economically but it also emphasises to a wider Jordanian public the practical usefulness of the cultural heritage and the desirability of preserving it as a long-term resource.

Perhaps the most startling usage of our flying is the way in which it has revealed the threat to Jordan's cultural heritage. The problem is everywhere but two locations stand out. First

is the Basalt Desert, or at least that part of it west of Azraq. The area is well-known for its prehistoric remains, most particularly the thousands of large animal traps known as 'kites'. We photographed several superb examples but were increasingly aware of how many of them were damaged by modern development. In the vicinity of Azraq that was perhaps expected; in the area of wide mudflats and basalt terrain between the Zerqa to Mafraq highway and the Azraq Oasis it was not. Yet it is there one encounters one of the most dramatic and disturbing transformations. Immense areas have been bulldozed clear of boulders and tens of thousands of olive trees planted

Comparison with the 1953 vertical photographs can show how many sites have been swept away. Most notable is the enigmatic prehistoric site of Hibabiya, first recorded from an aerial photograph and published in volume III of *Antiquity* in 1929. In the 1990s David Kennedy was unable on three attempts to find it from the ground, and failed again from the air in 1997 and 1998. We only succeeded in 2002 as we recognized the location — but no longer the remarkable square buildings of the so-called 'village'. This entire landscape is being lost with scarcely any rescue work, and the only records are old air photographs. An annual programme of monitoring the sites and the impact of agricultural development, to assist the Department of Antiquities to intervene and save or salvage as appropriate, could very quickly be initiated in Jordan.

The second location is at and around Ma'an. The town was renowned in the nineteenth century for its distinctive mud-brick tower houses set in mud walled enclosures for orchards and gardens. Progress is sweeping them away and they will soon be lost entirely unless a salvage programme is initiated.

But Ma'an is the centre of an area of copious springs and a system of *foggara* to tap more distant water sources. The arable land is being cleared rapidly with predictable results. Nearest at hand are the well-preserved traces of Ottoman trenches of World War I around the railway station outside Ma'an. Some are already being quarried. Little less than shocking is what is happening a little further east. There we have long known of three *qasrs*, large ancient reservoirs, extensive walls and channels and a large area with traces of fossilised ancient field boundaries, all in a compact area of c. 10 sq km. We photographed the well-preserved *qasr* and reservoir at Harnmam in 1998. In 2001 the entire interior of the *qasr* had been bulldozed away, and by 2002 the external walls and other nearby structures had gone too. The explanation lies in the rapidly expanding olive groves encroaching on the *qasrs* but, less obviously, destroying the traces of ancient farming before it has been explored.

The Future

The publication of our book in 2003 will mark the end of one phase of our project's objectives. The direct academic objectives remain and are more pressing than we envisaged. The pace of change is astonishing and often deeply disturbing: new houses, new roads, new developments of all kinds. The dramatic examples in the Basalt Desert and east of Ma'an are arresting, but should not obscure an equally important point. The major damage to Jordan's archaeological heritage is caused by the small but cumulatively immense erosion by farming and people removing small parts of ruins. Khirbet Ain mentioned above is an example. In October 2002 a visit revealed that new field terrace walls

were being slowly built nearby. The farmer, naturally enough, found the large masonry blocks of the tomb convenient and was steadily stripping it. A desideratum of Jordanian archaeology is recording what has survived and monitoring its fate in the years ahead. For both of these, aerial reconnaissance can be a vital tool.

When we began flying several years ago, a few non-academic commentators were unconvinced by the usefulness of the technique. We seem to have successfully challenged that belief. At the suggestion of the Director-General of Antiquities, Dr Fawwaz al-Khraysheh, in October this year, we have submitted an outline proposal to run a residential 'Workshop in Aerial Archaeology' in Amman in 2003. It is hoped it will be open not just to Jordanians but also to people from adjacent countries where no aerial archaeology is currently possible.

A second point sometimes made is that surely cheap satellite imagery has now made traditional aerial reconnaissance and photographs redundant. Certainly satellite images have an important role to play from environmental data through

providing a vivid photomap to actual discovery of sites. Much, however, is still at a large scale, taken at the wrong time of day or season and of negligible use. For many years to come there will still be the need for conventional air photography of the kind we have been privileged to carry out in Jordan.

A catalogue of the photographs taken in the course of the seven seasons since 1997 is available on the web at: <http://www.arts.uwa.edu.au/Classics/archeology/apamea/index.html>. Colour prints were taken on one camera at each site and complete sets of all of these from 1998 onwards have been deposited at the Department of Antiquities in Amman and at the CBRL Library in Amman.

For a recent survey of Aerial Archaeology in the Middle East see: D Kennedy 'Aerial Archaeology in the Middle East: The Role of the Military — Past, Present... and Future?', in R H Bewley and W Raczkowski (eds) *Aerial Archaeology. Developing Future Practice*, Amsterdam (NATO Science Series — Series 1: Life and Behavioural Sciences. Volume 337), 2002: 33-48; 346-347.

The 'Road Less Travelled': Survey in the Akamas

Erin Gibson (University of Glasgow)

Writing reports on fieldwork is always difficult — not because there isn't anything to say, but more because it's a question of where to start the tale. My tale starts in the Akamas Peninsula, one of my three survey zones for my PhD research on communication routes in Cyprus from the Roman to Colonial period.

My main interest lies in communication routes and the events and activities that occur along their course. Communication routes are often seen as just the means of connecting sites. It is all too easy to forget the activities that take place as we travel — the long conversations with friends that we somehow convince to go for walks in the rain, places where we stop to look at the view or readjust our socks. The most familiar communication routes, roads and paths are intimately linked with our daily lives and the rhythm of our living. This is what I aim to study — not just where one road ends and another begins, where the artefacts are and aren't, but rather how humans in the past moved and reacted to their surroundings; how they influenced communication routes and the route in turn influenced them.

The Survey Region

The area of the Akamas Peninsula chosen for intensive survey was 18 sq km, all lying within the jurisdiction of the Akamas Forest Division and the protection of the enthusiastic Akamas Forest Officers. The region was chosen with the hope that having so far been largely undisturbed by commercial development, remains of past routes would be preserved.

From the Baths of Aphrodite to the tip of Cape Arnauti, the Akamas Peninsula is a dramatic scene. Limestone cliffs, bedrock outcropping and deep gullies soon made me aware that no matter how accurate that topographic map in my clipboard was, it did not capture the drastic topography of the Akamas land-scape. The peninsula is currently uninhabited except for a few individuals who own private land, the ever-present goats and 4x4-driving tourists.

Survey of the Akamas took two forms: transect and block survey. Armed with a bundle of forms, notebook, GPS, camera, compass and flagging tape, I completed transects 30 m wide every 500 m, thus dissecting the peninsula north/south. These transects were systematically placed with the aim of recording the presence of roads and paths. Likewise, individual roads and paths were block-surveyed, recording details such as slope, vegetation, aspect and road/path morphology,

Think scrunch, think
scrunch, think scrunch,
think pat, think pat,
think...

At no period of my life
have I ever been more
aware of the sound that
my own feet make, my
ears accustomed to the
lone sound of my boots
scrunching across roads
and paths of bedrock,
gravel and dust...

During the first week of survey every road and every path that I encountered looked different. As time passed, however, more general trends began to emerge along with a greater understanding of what roads and paths represented and what communication in general meant.

Communication Routes

Communication can be defined in a variety of ways, and indeed definitions of communication today are different from those of the past. Communication in general can be described as the exchange or transmission of spoken, written or otherwise depicted messages. In the past communication required physical contact between the conveyor and receiver of the message, which in turn required some kind of movement. Fundamental to my research is the belief that people move through the landscape in planned and patterned ways, and that these routes of communication are traceable through the detailed survey of roads and paths,

Roads, paths and routes are not synonymous terms. A route is the general direction that humans move through the landscape. Routes are most commonly made up of roads and

paths. Roads and paths both form, and are the result of, individual choices made by those who tread the course of those roads and paths or wish to direct it. One only need look at a modern road map to begin to see the difference between roads/paths and the larger routes. By looking at both the route and roads and paths one can gain a better understanding of movement and interaction within a given landscape.

Roads, paths and routes are not static but are always changing. Any survey can only hope to record a snapshot of the landscape at one particular time. Likewise while surveying communication routes in the Akamas, recording details of road and path morphology, I was capturing only a snapshot of their lifecycle. Roads and paths change because of erosion, choice, changes in cultural forms and traditions, and changes in modes of transportation. All these factors contribute to route change and development. An action as simple as detouring a path around a newly fallen tree can have drastic effects not only the road/path itself, but on the overall route as well. As choices are made, changes occur and routes develop. In fact the process of route change and development can be seen vividly in the Akamas, where 4x4 vehicles are altering the structure of roads. Areas that previously could only be travelled by forestry vehicles are now open to elements of the tourist trade that have access to 4x4 vehicles.

Route Location and Morphology

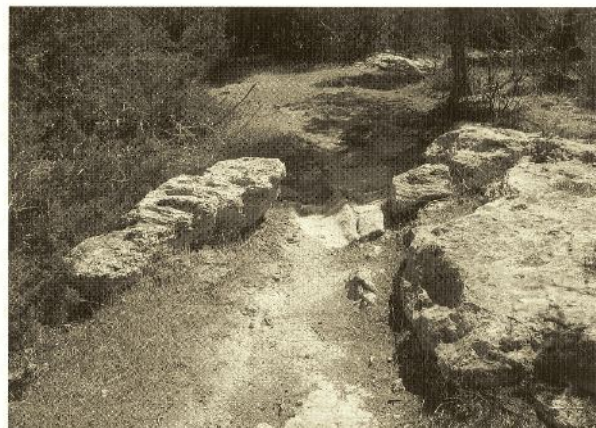
Paths and roads are the result of decision making — whether that choice is physically to construct a path or road, or to follow one which people have made before you. There are many factors which influence why certain routes were chosen over others. These factors are all in some way related to how the individuals or groups who make these choices relate to their surrounding landscape. Are they moving through the landscape to get to a certain point, or are they extracting resources or transporting goods into or out of the area?

Topography, road/path function, morphology and aspects of choice are interconnected and work together to form a communication route. Where topography constrains movement there must be a conscious decision to modify the surrounding landscape to make a road or path. I believe there is a relationship between landscape modification in these situations and the importance of the communication route. If large energy is expended on the production of a path or road in an area where movement is difficult, then the choice to form that route must have some positive relationship with the importance of the route to those who used it.

That said, it would be foolish to suggest that all cultures from all time periods reacted to topographic challenges in the same way. There is no one rule for how individuals and groups approach the construction of communication routes. The Romans are the most famous culture for the construction of road-based communication routes that drastically modify the surrounding landscape. Data may be biased towards those routes that were formed in areas of topographical constraints. By their very nature, roads and paths that are constructed where topography restricts movement are more visible.

Tracks, Paths and Roads — Definitions and Elements

In the Akamas goats have created their own routes of movement, while at the same time using paths and roads created by humans. Routes used primarily by goats have a



Following a well trodden path

distinct eroded appearance. In the Akamas those tracks constructed by goats and classified as 'animal tracks' feature prominently. They are often narrow and highly eroded with deep dust and tend to feature goat-height passageways through dense maquis.

Paths are commonly formed through repeated movement of foot traffic and pack animal. In the case of Cyprus, the primary pack animal used was, and still is, the donkey or mule. Many of the paths located during survey that were probably formed by pack animals are today used by hunters and goats.

Roads are intentionally built for the purpose of repeated movement by cart or something similar. The width and form that a road takes is largely dependent on the type of transport that they were used for. Vehicles had certain width requirements that could only be met with the construction of a certain width road. Likewise, the form of transport intended for use on these roads catered to the purpose for movement. A good example of this is the width of current forestry roads — these roads are built so that fire vehicles can easily and quickly move within the forest. The average fire-fighting lorry has a width of 3 m and therefore most forest roads are at least 4 to 5 m wide.

The distinction 'paths are formed through movement' and 'roads are built through intentional construction' quickly blurred in the Akamas. Where topography constrained movement, individual path users and road builders were forced to modify the surrounding landscape. Similarly confusing was the discovery that often roads found crossing agricultural fields in the coastal areas of the Akamas were formed through repeated movement.

Elements of a Road/Path

Locating movement in the landscape is not an easy task. And at first glance elements of roads/paths such as junctions, intersections and loops offer little help. It was on day 2 of my block survey that I realised how valuable these features were to my research and what information they could offer.

Loops form around obstacles such as large rocks or potholes. Loops may be associated with road/path development. I believe that the more decisions that are made concerning a road or path's course the more braided it becomes. In the long run the effect is compounded with more decisions being made the more options are available. Therefore it may be that the number of loops that exist along a road or paths course will increase through time.

Junctions are the point at which two or more roads and paths merge, and therefore they provide insight into how people moved through the landscape. Mode of transportation, topographical constraints and individual choice all affect the form a junction will take. Although this may seem redundant, merging of roads or paths requires one to be of greater importance than the other — with the less important merging with the more important. When mapped such junctions can then suggest route importance and the direction that individuals moved through the landscape.

Each morning on my way to the survey area I would encounter the same junction with trepidation — the point at which the road from Neochorio joins the road coming from Lachi and the road to the Baths of Aphrodite. Turning left from the inland village of Neochorio onto the coastal road was treacherous on motorcycle, as the turn had to be made sharply on loose gravel. The asphalt did not cover the southwesternmost corner of the junction that I had to use. The junction was laid out in such a way as to allow tourist traffic from Lachi or the Baths of Aphrodite to move easily along the coast. My movement through the junction was unexpected and unplanned.

Complex junctions incorporate loops or islands into their form. Such a junction would have eased that treacherous turn that I had to encounter each morning. A triangular island or a loop at the centre of such junctions enables movement in a wider range of directions than the simple junctions which just merge roads or paths together. A complex junction is an intermediate form between junction and intersection. In the Akamas many complex junctions tended to be associated with roads linking the main coastal road to the smaller bays.

Intersections are areas where roads or paths cross, and are the most familiar to us today. They usually involve four or more roads or paths, and seem to imply a focal point of intersecting routes of communication. Intersections involve the crossing of equally important routes enabling all directions of travel.

Communication Routes — the Larger Picture

Locating an abstract concept such as communication is not an easy task. However through merging road/path morphology, location, and definitions of communication with elements such as junctions, loops, and intersections it becomes evident that it is possible to map movement and speculate about changing communication routes through time. And though much of my above discussion has been technical, I must re-



The way home — road running beside Ayios Nikolaos Church and abandoned settlement

iterate that communication routes are more than the individual elements of roads and paths that I have discussed. There is a larger picture. Communication is more than mere movement from point A to point B. The 'way' is just as important and vital as the places that exist alongside it.

Humans personalise topography: we make it our own by attaching meaning to certain places. We experience it. We convert topography to landscape, a narrative of these experiences. There is a rhythm to every landscape, a way that people and animals move through it, a routine. Knowledge of a landscape is knowledge of this timing, this rhythm. I see routines and rhythms as synonymous concepts. I will conclude by sharing some elements of my daily routine to exemplify how the people of the Akamas, the places and our movements were linked.

The Girl that Walks'

I left for the field when the streetlights were still lit — 6:20 am. I met the same cars every morning as I made a left turn onto the main road — someone in a brown car and a grey car who always seemed to be late. They worked at the hotel whose name starts with an 'A' located after a gradual turn in the road to the left. The hotel has quite a fancy gold sign. I assume that the drivers of the grey and brown car started work at 6:30.

At 6:35, at the entrance to the Baths of Aphrodite, I was chased by a shaggy brown dog — he would bark twice while running onto the road and make one turn counter clockwise. I would say 'okhi' and shake my head at him and then we would go our separate ways. During the summer the brown shaggy dog was often accompanied by two torn turkeys.

At the Baths of Aphrodite I parked under the carob tree — it was my parking spot. It took me 4 minutes to get my gear off, lock my motorcycle and start walking. My walk was punctuated with spots that I did things. There was the spot that I stopped and looked behind me to see the sunrise and appraise the weather situation — was it to be a hot day, which way are those thunderheads going, or the wind blowing. Often at this point I would take a deep breath and talk myself into having energy for the day ahead. There was the spot that I had my first sip of water, the fountain with the bench where I often readjusted my boots, a peeing bush, the place where the goats munched their breakfast, the skiddy hill, the place with the deep dust where I could see the lizard and bird tracks, the place where I turned the mobile phone on, the place that smelled bad...

My rhythm of movement was not independent but linked with the movements of others. Nicholas was a goat herder and the butcher in Polis. He has goats above Fontana Amorosa and owns a white/beige pickup truck that rattles distinctively to let me know that he is coming — it was the sound of a ride home.

When I left I was pretty well known. The morning goats didn't run from me anymore when I said good morning to them, the men who fish on Sundays would give me a ride if they saw me, as would the members of the goat herder's family. The forestry officers knew me — I was the girl from Neochorio, friend of the boss Christos, I was an archaeologist who walked a lot and had a big motorcycle, the one that hurt her foot and would phone for rides once in a while...

My movement was not gone without notice — my rhythm over time became part of everyone else's. People looked for

my presence and if I was not there they wondered about me. My landscape became a part of theirs, and theirs of mine. In the Akamas I am Irini, or just Kori — the girl that walks...

Acknowledgements

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The Samaritans: Strategies for Survival of an Ethno-Religious Minority

Scan Ireton (University of Kent)

My research focuses on the two Samaritan communities of Neve Marqeh in Holon (a satellite town south of Tel Aviv) and Kiryat Luza on the Samaritan holy mountain Gerizim (adjacent to the Palestinian West Bank city of Nablus). The Samaritan population currently stands at 654 persons, almost exclusively resident in these two communities. Samaritans themselves believe that their Mosaic religious tradition has an uninterrupted history of 3,600 years. They are very proud and protective of their faith and are steeped in religious learning from an early age; children are involved in as much of the ritual as possible. The sacred mountain is the location for several sites of archaeological and historic interest, and the Samaritans have had a presence in the vicinity throughout their history.

I would like to thank the CBRL for its kind assistance, and also Mr Benny Tsedaka, a Holon Samaritan, for facilitating my access to the communities. Prior to undertaking fieldwork research or even writing a methodological essay on the ethics of fieldwork, I considered it wise to contact acknowledged contemporary experts on the subject of the Samaritans. Not only were ethical considerations addressed but I was also able to negotiate access to the community through my 'gatekeeper' Benny Tsedaka, the Samaritans' *de facto* roving ambassador.

For more general Israeli/Palestinian concerns I contacted Professor Yoram Bilu of the Hebrew University, Jerusalem, and Dr Nabil Alawi of the an-Najah University in Nablus. At the very outset of considering the Samaritans as a topic of study I visited the websites of Palestinian and Israeli Universities and speculatively emailed social scientists for relevant leads. Glenn Bowman my academic supervisor suggested that I contact Professor Bilu and the Palestinian sociologist Professor Salim Tamari. I also corresponded by email with Professor Reinhard Pummer of the University of Ottawa, a pre-eminent academic authority on the Samaritans.

During my studies I have focused on the Samaritans and the ethics of undertaking field research among an ethno-religious minority. As a marginal population in a highly politicised and tense region, there are inevitably risks to the community being studied and to the researcher. The conclusion that I arrived at, after consulting Mr Tsedaka and Professor Pummer, was that sensible field research and a sensitivity to the local and national environment justify the study. Both men informed me that in their experience the Samaritans are more than happy to discuss themselves and their culture, and would not consider an anthropological study intrusive. I found this to be very true on my visit during the Samaritan Passover in both informal and semi-structured interviews when referring to Samaritan traditions. More sensitive issues such as current political

of Glasgow. I am grateful for the support of the Cyprus Department of Antiquities. I thank Alekos Christodoulou, and the kind assistance of Christos and his fleet of friendly forestry officers in the Akamas. I also thank the people from Neochorio, Nicholas the goat herder, his wife and family for the rides from Fontana. Last but not least I thank my two supervisors Prof Bernard Knapp and Dr Michael Given for their support, Luke Sollars for database and form support and Paul Pelosi for answering my frantic GIS emails.

opinions and events were discussed but in a strictly off the record manner.

Without fail Samaritans I approached were open to discussing their religion, history and way of life, and I encountered a great deal of hospitality and friendliness. This project is significant and quite unique in that it addresses the contemporary issues of the Samaritans, whereas most studies pertaining to the community concentrate on the Judaeo-Samaritan polemics over which Israelite tradition is the true representative of Israel (the Covenant with God not the temporal state). It is also important as an anthropological study undertaken by a researcher very familiar with but not of the region and its faiths.

Throughout the two week field trip I kept a diary of anything that could be anthropologically useful. Before even contacting my gatekeeper Mr Benny Tsedaka, I sought to get my bearings and reacquaint myself with the language and culture. Fortunately I found that even after an eight year hiatus my Hebrew language skills, although limited, were almost intact. Sadly my Arabic, a mixture of standard Arabic and Egyptian colloquial, was left very wanting, but nevertheless was an asset in negotiating informal conversation, if not enough for competent interviewing.



The site of the Paschal Sacrifice. In the foreground lining the trench are Samaritan men and boys with the sacrificial young male sheep. The white clothes symbolise the white apparel worn by the ancient Hebrews during the flight from Egypt

There were days when I spent very little or no time with Samaritans, for example talking in Holon with elderly Jewish Israelis or in Nablus discussing US-Middle East relations and the Intifada with Palestinians. The highlight of the trip was four days spent on Mount Gerizim during the Samaritan Passover, where I observed the Feast of Sacrifice, and spent the Shabat morning in the Samaritan synagogue and a day in Nablus. The Samaritan High Priest Selloum ben Amram, who cuts a very Mosaic figure, generously accommodated me in his own house.

The Feast of Sacrifice

The Samaritan Feast of Sacrifice is charged with emotion and a sense of history, and is entirely unrehearsed. The 18 sacrificial young male sheep were lined up on either side of a trench filled with kindling and buckets. The men and boys were grouped in family order and sang the ancient Samaritan Hebrew prayers, as the High Priest and his fellow Cohanim in their green or bright blue vestments chanted in remembrance of the Israelite flight from Pharaonic Egypt. The ceremony built up to a crescendo as the sheep were swiftly slaughtered with an expert slitting of their throats. Subsequent to this many of the men seemed very emotional and embraced each other. The Samaritan men, women and children blooded their foreheads.

The men then set to without pause to skin, inspect, wash and salt the carcasses with the hides and entrails being burnt over the tannurim. The meat was skewered onto long spits, cleaned and rested against walls before being carried to the pit ovens, where men in family groups thrust the stakes into the ground and lowered heavy metal grilled lids over the holes. Hessian sacks were placed over the lids which the men sealed with red mud from buckets. Liturgical chanting accompanied the interment.

In the evening with the onset of the Shabat (Sabbath) groups of men returned to disinter the now cooked meat, which was quickly relayed back to the houses. It was taboo for me to enter the houses as the Samaritans ate the meat. My vegetarianism was not compromised, as the sacrificial meat is forbidden to non-Samaritans. The following morning in the early hours I observed the Samaritans worshipping in the modern synagogue. Again this was a predominantly male activity. Women had a peripheral presence, being allowed into the back of the synagogue near the entrance to where the High Priest brought the glass-encased Torah scroll for them to touch or kiss as the men had done. No photographs could be taken, as the Samaritan Shabat forbids the use of electrical equipment. The atmosphere was generally relaxed with people chatting, praying and contemplating. The prostrations and face-covering blessings seemed Islamic, as did the leaving of shoes outside the synagogue entrance. The tarboush or fez was omnipresent, especially among the Palestinian Samaritans, and the men again wore white clothing as they had the previous day.

I recorded interviews in English and Hebrew over a total of two or three days. All the recorded interviews were with male subjects, one in Holon and the rest in Kiryat Luza. I did have informal conversations in English, Hebrew and Arabic which provided me with insight both into the subject matter and more general local issues. I used a combination of semi-structured and informal interviews, and although I had a list of set questions I adapted my interviews to the situation and respondent. Some interviews were prearranged through

Benny, who was keen for me to meet as many Samaritan informants as possible, and others were spontaneous. Recording interviews was far more efficient than note taking, and although transcribing the notes is time consuming, especially when translation is involved, it is easier to detect emphasis and to record verbatim. As with photography recordings provide prompts and reminders.

Samaritan Identity

As far as identity is concerned a Samaritan can conceivably have several ethnonational identities including Samaritan, Israelite, modern Israeli, Palestinian and, until the late 1980s, Jordanian. This is before we consider different internal identities based on kinship, geography and gender. Today Samaritans are in a very precarious position, perceived externally as quasi-Jews (they refer to themselves as Israelites) whilst being the most continuously enduring identifiable Palestinian population. As careful diplomats, the Samaritans have managed to use such an identity to avoid antagonising their more numerous neighbours.

My research project considers how they achieve this, and in what ways the community is now seeking to use its 'halfway house' status not only to protect Samaritan interests but to encourage reconciliation and conflict resolution between their Arab and Jewish compatriots. The current escalation of conflict has involved recent Israeli reoccupation of the West Bank, with human rights abuses against Palestinian civilians, and Palestinian groups attacking local Jewish settlements. The effects of this may well have compromised the security of the Kiryat Luza Samaritans and their relations with Arab Palestinians. In recent weeks extremist Jewish settlers from the unofficial Bracha 'B' outpost (as distinguished from the more established Har Bracha settlement metres from the Samaritan village) have begun unprecedented verbal and physical attacks on Mount Gerizim.

As well as providing me with an invaluable collection of data through numerous interviews, the field trip enabled me to see first hand a small and thriving unique community. This experience has boosted my enthusiasm for the project in a way that library research alone could not. I am very grateful for the support of my department here at the University of Kent and the funding from the CBRL without which the field research would have been impossible. The Samaritans themselves made my brief visit invaluable with their hospitality and obvious interest in discussing their faith, history and contemporary situation.



Subsequent to the sacrifice of the young male sheep all inedible parts of the carcass are burned in the 'tannurim' (pit ovens)

Research Reports from Jordan

Moulding Ideas in Early Prehistoric Jordan

Michael Gregg (University of Toronto)

This summer saw me ricocheting between North America, England, Jordan, and Wales, completing my Master's degree in anthropology, and trying to decide between two different directions for my future archaeological research. My primary objective in travelling to Jordan for my third successive season was completing the research for my Master's thesis. Dr Edward Banning had also asked me to join him in the excavation of late Neolithic and middle Epipalaeolithic sites in Wadi Ziqlab, northwest of Irbid.

Before joining the excavation team in Wadi Ziqlab, I had to prepare for my own research project. In six weeks time, I would be manufacturing precise silicon latex moulds of six 'symbolic' artefacts from a multi-component, middle to late Epipalaeolithic hunter-gatherer encampment in the Petra Basin. Moulding compounds and my casting tools had been sent ahead by courier to Amman, but a bell jar and a hand-operated vacuum pump had to be located in the CBRL's cavernous storeroom, and a letter of permission secured from the Director of the Jordanian Antiquities Authority.

For more than twenty years, Dr Edward Banning has surveyed and excavated in Wadi Ziqlab. *Club Ted*, as Banning's ongoing project has been labelled by his envious colleagues, has produced countless publications on the Epipalaeolithic, Neolithic, Chalcolithic, and Early Bronze Age sites in northern Jordan, and has provided the training ground for hundreds of graduate students. This year, Banning was hoping to locate the settlement responsible for the late Neolithic artefacts that were scattered over a wide area within sight of the Jordan valley, and to uncover a Kebaran hunter-gatherer encampment that had been discovered 10 km upstream during the previous season.

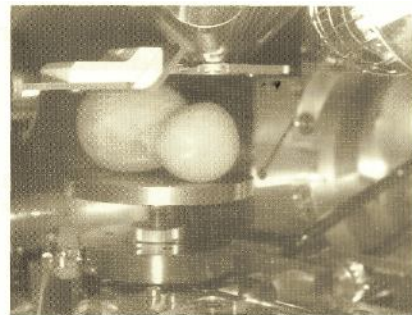
The excavation of the middle Epipalaeolithic site by a small team was directed by geoarchaeologist Lisa Maher, while Banning led a larger group in the systematic probing of the agricultural terraces in the wadi. After four weeks of test-pitting, a large quern was unearthed and the Neolithic team refocused its energies to an area clustered around where the immovable groundstone had been discovered. 'You've got to fish where the fish are', quipped Dan Rahimi of the Royal Ontario Museum, and more groundstones were soon retrieved, along with dense layers of stone tools, ceramics, and bone fragments on what appeared to be an outdoor surface of a farmstead. As many of the artefacts were lying flat, they were left in place and piece-plotted by the University of Tulsa's Seiji Kadowaki and myself.

Ensuring that my field notes were in order, I bowed out of packing up artefacts and the field camp as gracefully as I could, and began to make my way south from Wadi Ziqlab to Wadi Musa. Nadja had arranged a car in Amman, and a discount rate at the Resthouse near the gates of Petra. But the hotel was closed when I arrived. The lobby stood deserted. Because of the events of September 11th in Washington and New York, and the continuing conflict in Palestine, European and North American tourists (who normally flock to Petra at

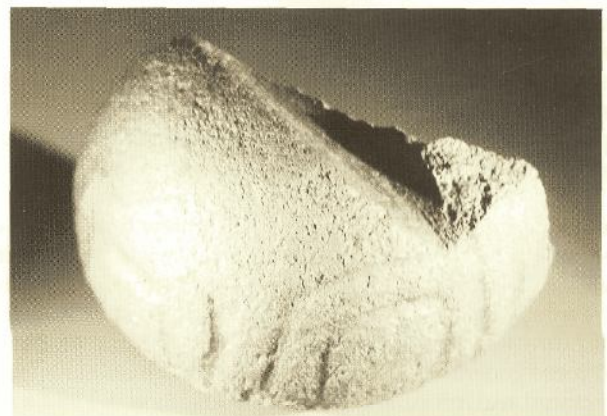
this time of year) were staying away in droves. As a result, Intercontinental Hotels had shut down its more modest Resthouse, and upgraded anyone lucky enough to have reserved a room at £15 a night to its nearby five-star accommodations. The chief inspector of the Antiquities Authority for the Maan region, Mohammed Alaziz, quickly located the artefacts I was looking for in the storeroom of the museum, and my well-appointed apartment at the Petra Forum was converted to functional casting workshop.

Thirteen 'symbolic' artefacts, including anthropomorphic 'figurines', sandstone fragments engraved with abstract geometric designs, and a maeander-patterned, basalt 'shaft straightener' had been recovered during two seasons of excavation of a hunter-gatherer encampment on a steep talus slope at Petra by Dr Joel Janetsky of Brigham Young University and Dr Michael Chazan of the University of Toronto. Chazan and Janetsky had taken a number of the artefacts to North America, but the most promising objects had been retained by the Jordanian Antiquities Authority.

My Masters thesis required precise replicas of these objects be manufactured in order to conduct a microscopic comparison with other 'symbolic' artefacts from the Upper Palaeolithic, Epipalaeolithic, and Middle Stone Age periods in Europe, the Levant, and Africa. Limitations of both time and resources precluded the possibility of identifying the types of tools that had been used to create the markings on the Wadi Mataha



Chert figurine from the late Epipalaeolithic encampment in Wadi Mataha on the staging platform of a scanning electron microscope



SEM image of striations on the 'neck' of chert figurine (WM1563) indicating that the artefact is anthropogenic in nature and not formed as the result of taphonomic processes

assemblage, but in my hotel room I fabricated latex moulds to a high degree of fidelity, and produced epoxy resin casts when I returned to the laboratory in Canada.

In the two months in Jordan, I had decided that my future lay in the north and west of Great Britain, and Dr Brian Boyd at Lampeter has agreed to help supervise my research into the identification of dairy food production in the Fertile Crescent.

Khirbet et-Tannur Temple Complex

Judith McKenzie (Oxford University), A.T. Reyes (Groton School), and Sheila Gibson (Oxford)

The main aim of our season in March 2001 was to reconstruct on paper the Nabataean temple complex of Khirbet et-Tannur, about 70 km north of Petra. Everyone who has visited the Jordan Archaeological Museum in Amman is familiar with the famous semi-circular 'Atargatis panel' in the centre of the back wall, with the bust of a goddess veiled in leaves and surrounded by florals. Along with the Zodiac Tyche and most of the architectural fragments in that room of the museum, it came from this temple.

The importance of the Khirbet et-Tannur temple complex is indicated by its location at the top of Jabel et-Tannur, the prominent mountain at the confluence of the Wadi La'ban to the south and the Wadi Hesa to the north. Wadi Hesa (the biblical River Zered) is the deep ravine running east-west which divides biblical Edom from Moab to the north. It thus marks the northernmost point of the part of Nabataean territory which coincides with the traditional territory of their predecessors the Edomites. This continuity is reflected by the only inscription there with a god's name, mentioning the Edomite god Qos, but written in Nabataean.

The temple complex was excavated in 1937 by the American Nelson Glueck, in conjunction with the Department of Antiquities of Transjordan. The main report on it was not published until 1965, as *Deities and Dolphins*, by which time the architect Clarence Fisher had died. Consequently, there are inconsistencies and omissions in this report which affect the accurate reconstruction of the building, and so of our understanding of the temple complex.

More recently, McKenzie prepared drafts of new elevations of the facades of the altar platform in Periods II and III, and the Inner Temenos Enclosure which surrounds it. These drawings were for a chapter on the sculpture of Khirbet et-Tannur and Petra for the volume to accompany the major international exhibition on Nabataean culture, which is planned to begin travelling North America in 2003. They could only be completed once the architectural blocks in the Jordan Archaeological Museum and its garden had been examined first-hand.

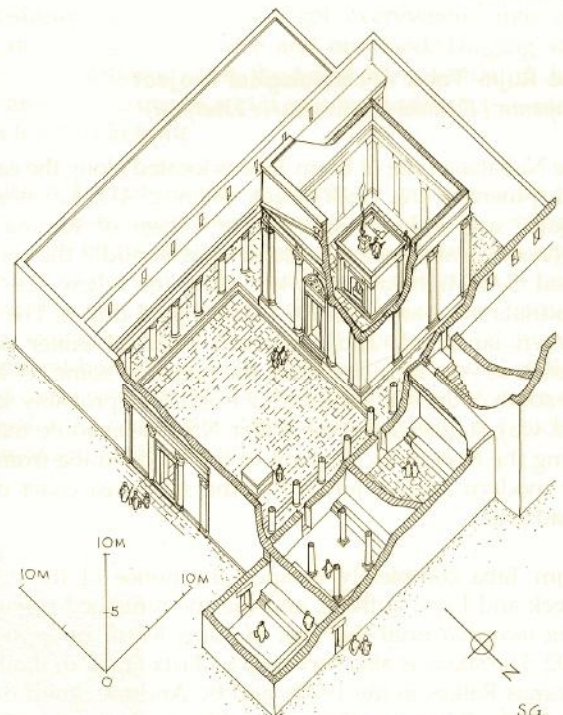
It became apparent that, with these new more reliable elevations, it would be possible to reconstruct the whole temple complex in 3D on paper. As a result, Sheila Gibson prepared reconstruction drawings based on McKenzie's revised elevations and observations from detailed examination of the published record. These were finalised after our visit to the site. We were lucky that Sheila Gibson was available for this, as her earlier work includes the axonometric drawings in J B Ward-Perkin's *Roman Imperial Architecture*.

The temple complex stood alone at the top of Jabel et-Tannur beside the King's Highway 7 km north of Khirbet edh-

Dharih. It is a steep climb, taking about an hour rather than the usually-mentioned 20 minutes, due to the current lack of even a goat-track for the last part of the climb, which is quite dangerous as a result. The building was left by Glueck in good condition, with most of the paving and lower parts of the walls *in situ*. Since then, however, it has been badly damaged by 'goatherds looking for gold', who have moved many of these stones. Despite its inaccessible location, much of this damage seems to have occurred by 1966 when it was noted by the Abbé Starcky.

Our visit to the site was far more successful than expected, despite the extent of this damage. In particular, important architectural blocks still survived which were not illustrated in Glueck's report. It was possible to confirm that there were colonnades along either side of the forecourt and continuing beside the Inner Temenos Enclosure. The evidence for these included the bases, capitals and drums of their columns. Blocks of the plain Type 1 Nabataean capitals from the sides and back of the Inner Temenos Enclosure were identified from their dimensions, as well as those from the facade at the front of the forecourt. It was also possible to identify the cornice mouldings from the entablatures of these orders. Those from the Inner Temenos Enclosure are distinctive with ornate carving. They notably include a block from the apex of its pediment which is not indicated in the reconstruction published by Glueck. This means that the Inner Temenos Enclosure had a pediment, as has also been recently discovered from the temple at the nearby Nabataean settlement of Khirbet edh-Dharih, which was decorated by the same sculptors.

The detailed basis of our reconstructions appears in a lengthy article in *Palestine Exploration Quarterly* 134 (2002). This also includes observations on the use by Nabataeans of anthropomorphic representations of gods and their functions. These can be made in the light of the accurate reconstruction of the architecture, distinguishing, for example, between those for decorative purposes and cult statues.



Nabataean Temple Complex at Khirbet et-Tannur, main phase c. AD 50-150. Axonometric drawing by Sheila Gibson

After submitting the detailed report on the construction of the building complex to *Palestine Exploration Quarterly*, we discovered that records of the excavation survive in the ASOR Nelson Glueck Archive, Semitic Museum, Harvard University. These records include the dig journal and record book, the architects' field notes and drawings of the mouldings, Glueck's photographs, and the pottery sherds. The photographs which show blocks before they were moved by the excavators are included in an article submitted to the *Annual of the Department of Antiquities of Jordan*, along with a summary of the reconstruction and its implications. The other material will be published separately. In April 2002 McKenzie and Semitic Museum intern Carrie Duncan completed the initial sorting and organisation of the pottery sherds in preparation for their dating by Nabataean pottery expert Stephan Schmid. The report on the lamps will be prepared by Deirdre Barratt.

Having ascertained the reliable reconstruction of the Khirbet et-Tannur temple complex, we can now proceed with the analysis of its design, plan and function in the context of recent work on the other Nabataean temples. This will be the focus of our next fieldtrip.

Acknowledgments

We would like to thank Dr Fawwaz al-Khraysheh, Director-General of the Department of Antiquities, Dr Bill Finlayson, CBRL Director, Nadja Qaisi, CBRL administrator and our driver, Aiman el-Qadi. The fieldwork was funded by the Palestine Exploration Fund, a TW Greene grant and the Craven Committee of Oxford University, the Dillon Fund of Groton School, and the Seven Pillars of Wisdom Trust. We are grateful to the American Schools of Oriental Research for permission to publish the material from the ASOR Nelson Glueck Archive, and to Prof Joe Seger, Dr Rudolph Dornemann, Prof LE Stager, and Dr Joseph Green of the Semitic Museum for their organisational and logistical support. The work on the ASOR Nelson Glueck Archive is funded by the British Academy, the Dillon Fund of Groton School, and the Craven Committee of Oxford University.

The Rujm Taba Archaeological Project

Benjamin J Dolinka (University of Liverpool)

The Nabataean site of Rujm Taba is located along the eastern escarpment of the Wadi Araba valley, c. 41.5 km north of Aqaba, and 4 km south of the village of Rahma. The archaeological remains at Rujm Taba straddle the modern Dead Sea Highway, c. 1 km north of where the Taba Mudflats meet an extensive field of sand dunes. The well-known landmark and important regional water source known as Ain Taba lies along the highway some 3.5 km to the south of the site. In antiquity Rujm Taba probably served as a way station along the major Nabataean route that ran along the eastern escarpment of the Wadi Araba from Aila (or modern Aqaba, Jordan) to the southeast coast of the Dead Sea.

Rujm Taba completely escaped the notice of the ancient Greek and Latin authors, and the site remained essentially *terra incognita* until the visit of Alois Musil in September 1902. The site was also surveyed by Fritz Frank in the 1930s, Thomas Raikes in the 1970s, and by Andrew Smith during the 1990s. Taken together, all of this previous research was rather cursory, had a broader and more regional focus, and did little to further our understanding of Rujm Taba.

In August 2001, under my direction, the Rujm Taba Archaeological Project (RTAP) conducted an intensive survey and reconnaissance of the site and its environs. RTAP identified two main archaeological components at Rujm Taba: a Nabataean caravanserai and a Nabataean village. RTAP selected two blocks of thirty-six 5 x 5 m squares for intensive surface collection: the first encompassed the entire Nabataean caravanserai, structure A001; the other was an area selected within the apparent central portion of the village,

The Nabataean caravanserai, or structure A001, is located 55 m west of the modern highway and c. 150 m north-west of a major water source, known locally as Bir Helwan. It is roughly square, measuring c. 20 x 20 m, and has at least four internal rooms. The entire building seems to have been constructed of the local granite, which is plentiful in the nearby alluvial fan. It is preserved to a height of at least 1.25 m above the desert floor,

but in some places — eg the northwest corner — it rises to more than 2 m.

On the eastern side of the Dead Sea Highway, we investigated the remains of a Nabataean village in field C. The village occupies an area of 1.17 hectares and rises from 73 m above sea level near the highway to 86 m at its easternmost limit. The general boundaries of the village were located by walking transects across the site until surface ceramics and architectural remains were no longer visible. The team mapped the centre of each probable architectural feature and estimated its physical extent. In total, 22 such features were documented, making the village much more substantial in size than suggested by previous researchers. While 11 of the features likely represent separate structures, the others may well be smaller components of much larger buildings,

The survey collected a total of 1,539 sherds during the 2001 field season. Only 325 pieces of pottery were recovered from structure A001, and this is no doubt due in part to the fact that the building was sherded heavily during the previous survey work of both Raikes and Smith. Pottery from structure A001 reinforces its Nabataean origin. Another 1,214 sherds were collected from the Nabataean village, and these attest to its domestic nature. A CBRL Travel Grant allowed me to study the RTAP 2001 ceramics, in order to prepare them for publication.

Analysis of the pottery from our survey, particularly the Nabataean painted and unpainted finewares, has provided valuable insights into the occupational history of Rujm Taba. It appears that the village was founded before the construction of the caravanserai. The ceramic evidence also suggests that both the village and caravanserai flourished during the late first century AD. This would seem to call into question the notion posited by some scholars that Nabataean overland caravan trade was in decline during this period. Quite to the contrary, Rujm Taba appears to have thrived in an era of supposed economic deterioration,

In addition, our survey ceramics seem to point to a decline in activity during the early second century AD. Whether or not this decline should be attributed to the Roman annexation of Nabataea in AD 106, or an earthquake that devastated the Rift Valley at approximately the same time, is still a matter of debate among scholars that could easily be resolved through stratified excavation at Nabataean sites in the valley.

Finally, there is some evidence for either limited occupation or reoccupation in the village during the late third and early fourth centuries AD, as evidenced by a handful of Late

Roman jar sherds discovered there. Taken together, the ceramic evidence gathered by our survey has provided a tentative occupational history for Rujm Taba, but only excavation at the site will provide definitive results.

Both the Nabataean caravanserai and village at Rujm Taba have the potential to provide excellent stratified deposits from the Nabataean period that are unspoilt by later occupation. Both areas, however, are in immediate danger from natural and human destruction. We intend to conduct future fieldwork at the site, in order to record as much of Rujm Taba as possible before the resource is lost completely. In order to preserve the site for future interpretation and appreciation, we are developing strategies for conservation of the extant architectural features. The project also hopes to work with the Jordanian Ministry of Tourism and Antiquities to investigate the cultural tourism potential of this highly accessible site. Located along the busy Dead Sea Highway connecting Amman to Aqaba, Rujm Taba is well suited to provide visitors with a glimpse of life at an ancient Nabataean road station in southern Jordan.

Excavating a Sixteenth-Century Turkish Fortress in Southern Jordan

Andrew Petersen (CBRL and Cardiff University)

If, as many archaeologists seem to think, the worth of an archaeological project is measured by the degree of suffering involved, then the excavations and survey at 'Unaiza could be judged a great success. The project was originally planned to take place in early Spring, but a number of events including the birth of my second son Rowan in January 2002 meant the time of the dig had to be postponed until June. In Britain June is often still a bit cool, yet in the south of Jordan it is already very hot, especially if you are camping in two small tents with no other shade than the black basalt walls of the Ottoman fortress. In fact we should have had three tents, one each for myself, Pierre and Ahmad. Due to a misunderstanding at CBRL in Amman, however, the third tent turned out to have a very particular shape. After about quarter of an hour examining the poles and trying them in different combinations we found that the one person tent was in fact the toilet tent. After a brief discussion which involved seeing who was the longest and shortest we decided that one of us, Pierre, would sleep in the back of the Landrover.

Before I got into the tent that night I thought that Ahmad and I had got a better deal than Pierre. These thoughts were soon dispelled when I got into my sleeping bag and felt the basalt pebbles burrowing into my back. Later on that same night I considered moving into the Landrover as a pack of wild dogs (or were they wolves?) circled our small encampment with hungry howls. Later that night, after twelve o'clock, the desert highway which had seemed so quiet and almost disused by day became an HGV race track with screeching brakes, air-horns and roaring truck engines.

At 2:00 am a finale was reached when the quiet railway station opposite emerged from its slumber to become a shunting yard with huge diesel trains nudging wagons of phosphate into a siding awaiting the arrival of a relief engine. The next morning all three of us looked and felt like we hadn't slept all night — and this was just the first day.

The excavation of the site was the easy part, at least when we were in the shade. As the sun moved round to the west the shadow of the walls disappeared and was replaced by glaring sunlight that was also reflected off the white plaster covering of the walls. For the first time in my life my lips were sunburnt. In the afternoons we rested in the shady rooms of the castle. The entrance was the best place as a cool wind blew through the gateway in the mid-afternoon. By the end of each day we were covered in thick dust held in place by layers of dry sweat. The only washing facilities were a collapsible plastic container which held four litres of water — not quite enough,

After a few days we settled into a routine of digging in the mornings and surveying in the afternoon. Pierre worked inside the castle whilst Ahmad and I worked on the outside facing Jabal 'Unaiza, a small volcanic hill which had strewn basalt over the area for a radius of 3 km. On the third day of the dig one of our two workmen told us that a letter had recently been found inside the castle. It was addressed to Said Effendi and said, 'We write to tell you that though we are alone we are not afraid and we have hidden in a cave not far from here'. Although we could not check whether the letter was real, or ever existed, it was a dramatic reminder that real people had lived in the fort and may have suffered extreme hardship,

We tried to recreate something of the daily life in the fortress by making Turkish coffee in one of the rooms which we came to think of as a kitchen. Towards the end of our time there the 'kitchen' became uninhabitable as we had been discovered by the flies who were after any tiny drop of moisture in this scorched landscape. Our final days at the site were clouded by dust storms which blasted across the basalt-strewn landscape. Dust got everywhere, into our tents, our clothes, our coffee and our food. Digging was particularly difficult when the wind blew swirls of dust raced around the trench and it was impossible to see more than a few feet in front.

This description of our life at 'Unaiza is perhaps a bit too negative... There were times when it achieved an exceptional beauty, with bright stars sticking out of a dense black night sky, or when the sun set behind the volcanic mass of Jabal 'Unaiza. The best parts of our time at 'Unaiza were human, as for example when the guard from the Highways Department brought us fresh mint tea, or when the station master came running into the fort to tell us that Cameroon had beaten France in the World Cup (perhaps not such a good moment for Pierre).



Our tents camped outside the entrance to Qal'at 'Unaiza



Pierre and Ahmad in the kitchen waiting for the coffee to boil

By the end of our time at 'Unaiza we had learnt something of the feeling of being a Turkish soldier locked into a fort in a harsh and distant landscape. We had stayed less than three weeks — the Turkish soldiers were required to spend a whole year. It is no wonder that the garrison system soon broke down, with Turkish janissaries replaced by Bedouin — the very people whom the forts had been designed to exclude.

A preliminary report on the excavations will appear in *Levant* 35 (2003).

Bayt Bennett: The Archaeology of the Former BIAAH Building

Andrew Petersen (CBRL and Cardiff University) and Tobias Richter (CBRL)

Most archaeologists would agree that our discipline deals with three fundamental, interconnected aspects: time, space and the material world. The connectedness of these is what we prefer to call context. We contextualize materials, such as artefacts, in space and time. On the other hand space can only exist through the creation of materiality, and only time makes us understand our movement through, and perception of, space. Our understanding of time is based on the changing nature of the material world and the space we inhabit.

With these three concepts in mind archaeologists usually study the remote, unfamiliar and unknown past. However, for more than a decade archaeologists have begun to acknowledge that, besides trying to understand the past, it is also vital to understand the context in which they themselves work.

Coincidentally, it is now roughly a decade since the British Institute at Amman for Archaeology and History (BIAAH, now CBRL) moved from its previous premises near the main gate of the University of Jordan to its present location in Jubaiha. Now, nearly 25 years since the founding of the British Institute at Amman, the CBRL is moving to yet another building. This important anniversary, and the



Old BIAAH building neglected and abandoned

imminent move, reminded us of the old BIAAH building, which now stands neglected and uninhabited.

The history of the discipline and the work of various foreign archaeological institutes in the Middle East is well known and generally accepted to be an important consideration in the appraisal of current research frameworks. However, it is interesting that, as archaeologists, we have not considered the material and physical representations of our own work in the Middle East. It is particularly surprising that so little consideration has been afforded to the old British Institute (BIAAH). Once an important symbol in the lives of both foreign and Jordanian archaeologists, this building, currently derelict, may well be demolished in the near future.

The importance of an explicit appraisal of this structure lies in the tension between individual research agendas and contextual constraints of time, place and materiality. The existence of research paradigms in present day politics is one of the framing factors used by institutions to select buildings, and to modify them according to their specific needs. Likewise the creation of these particular settings also has a profound influence on our perception of place and time, and is thus intimately connected to present day politics. The dualism arises out of the perceptions and influences these settings have on individual research methodologies.

Our 25th anniversary and the upcoming move, in combination with the continuing neglect, were the reason that we decided to document the old building in its current state. Our primary form of documentation was a series of digital images taken on Monday, 21 October, 2002. Our visit to the old building was significant, because only one of us had actually seen the building while in use. The other could only look at the site with- the eyes of the present day archaeologist, albeit enriched by the oral testimony of the other. These impressions were deepened by our discovery of scanned photographs of the former institute while in use.

The thing that was most noticeable was that, even in its derelict state, the old building had the appearance and layout of a suburban family house. It is evident that research spaces, living spaces and dormitories were tightly interwoven into an 'archaeological' household. The fusion of private and public spaces speaks of the mixture of privacy and research. This is clearly demonstrated in the photograph where a thin trellis attempts to separate the library from the lounge. The central staircase leading from the upstairs dormitories to the ground floor presents opportunities for ceremonial/dramatic entrances into the public domain. There was no hiding of individual arrivals or departures.

When we began considering the surroundings of the building we realized two important aspects about its location. First, it stands alone in an area which used to be, and still largely is, relatively open space. Second, its commanding position imposes feelings of confidence in status and claims authority. Its proximity to the campus of the University of Jordan suggests an academic relation and connection. Interestingly, the campus has at all times remained a physical focus point in the landscape of the BIAAH/CBRL.

Another aspect of the old building in the present is its degree of physical degradation. Smashed windows, rubbish in the toilets, destroyed interior, graffiti and general urban dereliction make a very unpleasant environment. This is very different from the type of site that archaeologists are usually concerned with. It is not a pristine object of study,



The ground floor of the BIAAH

because it is neither exceptionally old nor miraculously important to most people. Partially this is because its current state pays no respect to the past memories invested in it.

Nearly all of the building's use-life was as a British archaeological institution, yet the structure in its present state gives no real indication of its past importance and use by archaeologists. The building in its present condition can be contextualized through the known history of the Institution. More importantly, the building and its location do hint towards general choices and decisions made by specific individuals, who themselves worked in very particular conditions and frameworks. Thus, the study of such structures may offer a deepened understanding of our own work in the present, because we are able to connect history and archaeology with each other.

Dhra' Excavation Project

Bill Finlayson (CBRL) and Ian Kuijt (Notre Dame University)

We conducted our second season at Dhra' during June and July. This was made possible by the shade of a giant canopy

of agricultural mesh, which made the site often more comfortable than the base camp at Mazra. As in 2001, Samantha Dennis acted as our Field Manager.

Our main objective was to extend the main 2001 excavation area to expose a large area of the occupation and allow us to begin to understand the organisation of a Pre-Pottery Neolithic A (PPNA) settlement. This objective was only partially realised as, contrary to our expectations from the 2001 season but more in line with Crystal Bennett's work in 1979, we encountered a significant Pottery Neolithic presence. Although at first we thought this would prove to be simply a nuisance and delay, it became clear that we had some well-preserved features, and a good material culture assemblage. In some respects the main story for 2002 was this Jericho IX or Lodian phase.

Work on PPNA deposits did continue, especially in the area around the mud-walled structure located in the previous season. Here we found good evidence that the structure was multi-phased, and that there were other structures immediately adjacent. We did not, however, excavate deeply here, as our main efforts went on the excavation of the Pottery Neolithic phase. We have now excavated most of the features from that phase and in 2003 will return to continue with the excavation of the earlier material.

Other important aspects of the 2002 work on Dhra' were the continuing analysis of thin sections (Trina Arpin), which proved highly informative, and we are now applying for funds for a postdoctoral research programme on this aspect of the work. We have kept fairly up-to-date with all aspects of artefact analysis, including work on the lithics by Nathan Goodale (PPNA typology and technology), Seiji Kadowaki (Pottery Neolithic typology) and Sam Smith (microwear analysis). Jode McKay worked on the ceramics. Lisa Maher conducted a very useful geomorphological study of the area around the site.

Research Reports from Israel and the Palestinian Territories

Romanisation in Early Roman Palestine

Reuben Lee (University of Liverpool)

The purpose of this research is to analyse how early Roman Palestine had become increasingly absorbed into the control of the Roman Empire through the building programme of the Herodian dynasty; how new meanings of the transforming landscape were produced in the Jewish society; and the Jewish social meanings of the new space.

Through the imposition of new buildings on existing environments and the planting of new cities, the building programme considerably influenced Jewish experience of the Palestinian landscape in the first centuries BC and AD. The architectural form of Herod's buildings is always interpreted as 'Hellenistic' and 'Roman', but recent studies suggest that the oriental architectural styles also had a substantial impact in the Roman Near East. Some architectural features in the Roman East were not simply 'Hellenistic' or 'Roman'. Instead, the building program created a cultural landscape of hybrid architectural elements of both Graeco-Roman and Near Eastern character.

From a political perspective, the building programme was a means to tighten control on administration, economy, state

security and religion. To a certain extent Palestine enjoyed autonomy. Jewish tradition was still respected and Jewish religious laws worked side by side with the Roman laws. But state control was becoming increasingly strict as a consequence of Herodian constructions and urbanisation. In particular, the increasingly dense network of governmental institutions and military presence became a means to exercise surveillance on people, as well as control over regional administration, taxation and military stability. Although the builders might have aimed at quick success in stabilising the politics of the client kingdom, the Herodian building programme resulted in pushing Palestine into the control of the Imperial government. The Herodian building programme thus conveyed the meaning of political 'Romanness' and subsequently became an agency for political Romanisation.

However, the Jewish population did not share the same view as the Herodian government towards the transforming landscape. They might not have understood the political meanings to the same degree as the Herodian government. 'Roman' or imperial meanings might not have been perceived by the Jewish general public. Even though the Jewish population was under control, they were not aware of how large scale and powerful the influence of the building

programme would be. Instead of politics, they would conceive the new space according to their cultural perspectives. For example, ritual purity of space as well as the boundaries between gentile and Jewish space would be their particular focuses. As a result, even though some buildings were of Italian forms, the new architectural elements were appropriated into Jewish society and were transformed into other cultural meanings. The addition of Italian architectural details thus did not really result in Graeco-Roman cultural diffusion and cultural Romanisation. In the context of Jewish Palestine, Graeco-Roman architecture thus became a new cultural product different from those in Italy.

Thanks to the CBRL travel grant, I was able to visit many ancient sites and analyse both the use and the production of space in Israel and Jordan, between 6 and 18 September. Those ancient sites included Jerusalem, Caesarea Maritima, Masada and Qumran. Moreover, I also visited Amman, Madaba, Jerash, Umm Qais and Petra as comparative samples to the Herodian sites I studied.

Gazetteer of Medieval and Ottoman Buildings in Palestine, Part II

Andrew Petersen (CBRL and Cardiff University) and Denys Pringle (Cardiff University)

A *Gazetteer of Medieval and Ottoman Buildings in Palestine*, Part I, by Andrew Petersen with contributions by Marcus Milwright, was published in the British Academy Monographs in Archaeology series in 2001. The book was the outcome of a decision made by the Council of the former British School of Archaeology in Jerusalem in January 1988 to undertake a comprehensive audit of examples of medieval and Ottoman architecture surviving in Palestine, with a view to planning programmes of more detailed survey and investigation in due course. As it happened, the surveys and the compilation of the gazetteer went forward in parallel. The results of some of the former may be seen in the series of articles appearing in *Levant* over a number of years, while the Gazetteer has so far been partially published in the volume referred to above, supplemented by Denys Pringle's *Secular Buildings in the Crusader Kingdom of Jerusalem: An Archaeological Gazetteer* (Cambridge University Press 1997).

The first part of the *Gazetteer* extended geographically to the area of pre-1967 Israel (excluding West Jerusalem) and was based on a literature search, research in the archives of the former Department of Antiquities of Palestine, housed in the Palestine Archaeological (Rockefeller) Museum, and in those of the Palestine Exploration Fund (PEF), as well as field survey.

Part II of the *Gazetteer*, which is now being sponsored by the CBRL, will cover the West Bank and Gaza Strip. The current political situation means that it is at present virtually impossible to carry out extensive field work in these areas. This, however, makes it all the more important that information on these buildings is brought together and published, both to provide a record of what exists (or existed during the time of the British Mandate), and to help to raise awareness of the built heritage in these areas before it is lost either as a result of the current conflict or through modern development and construction.

Details of medieval and Ottoman buildings in the West Bank and Gaza were initially obtained from photocopies of records from the Department of Antiquities of Palestine compiled during the British Mandate (1918-48) and kindly

made available to us by the Israel Antiquities Authority. These photocopies and other relevant material from the PEF and the CBRL's Crusader Churches Project currently fill ten lever-arch files in the School of History and Archaeology, Cardiff University. The records contain photographs, detailed reports, sketches and plans of a wide variety of buildings, from small village shrines to major building complexes such as Khan Yunis and the Great Mosque in Nablus. During the last seven months, Andrew Petersen has sifted through these records in order to produce descriptive accounts of each building. The task has been complicated by the fact that some buildings are known by more than one name and thus appear twice in the files, while other buildings may only appear in photographs and have no other information by which to identify them,

In general, however, the files in the Mandate-period archive provide a high standard of information, and often include specialist reports by engineers or architectural historians. One of the interesting aspects of the work is the inclusion of reports by Captain K A C Creswell, RE, during a tour of OET (Occupied Enemy Territory) in 1918-9 immediately after the end of the First World War. Creswell's reports not only provide succinct descriptions and analysis of buildings but also often include excellent full-plate photographs (the original negatives of which are now housed in the Department of Eastern Art in the Ashmolean Museum, Oxford).

The majority of reports are by Department of Antiquities Inspectors, many of whom later became famous in their own fields. L A Mayer, for example, whose name is commemorated in the Museum of Islamic Art in West Jerusalem, began his career as a Junior Inspector of Antiquities. Other well-known archaeologists who feature among the reporters are D C Baramaki, S A S Hussein, C N Johns and P L O Guy (who was also Director of the British School of Archaeology in Jerusalem),

Recording History from Below in-Palestine

Linda Tabar (School of Oriental and African Studies)

Throughout the world archaeological resources are protected by governments, and enshrined as 'public property'.

Archaeology, understood as the systematic excavation of primary materials that manifest and display the thoughts and actions of ancestors, is not only an important end in itself, but it also serves a number of cultural, pedagogical and symbolic functions for a nation. It documents the lives of descendants and *tells the story of a country*.

Yet in Palestine, powerful external forces have shaped the interpretation of those primary resources. The archaeological record has been used to chronicle the biblical narrative of the Judaeo-Christian tradition, and to construct as well as justify the Zionist narrative and the establishment of the State of Israel in 1948.

Historically, the indigenous Palestinians were not only physically dispossessed after 1948, but they were alienated from their own heritage, particularly their more distant history from the early Islamic periods and their more recent, pre-1948 cultural past. Additionally, the actual preservation of Palestinian historical documents was sabotaged on a number of occasions, as records were confiscated or destroyed by Israel, most notably the seizure of the library of the Palestine Resource Center in Beirut in 1982 and the obliteration of entire villages in 1948-49.

Nonetheless, a Palestinian National Authority has been created, and its Ministry of Culture, Ministry of Tourism and Antiquities and other national institutions are now working to construct a space for Palestinian collective memory, in which to document and preserve the Palestinian historical narrative.

Narrating Palestine

Palestinians possess a wealth of cultural resources. These resources, however, are invariably embodied in unconventional, non-state forms that challenge hierarchies of knowledge, and the boundary between 'public' and 'private', inscribed by modernity and associated with the nation-state. These cultural forms include oral histories, local folklore traditions, village architecture and the materials conserved by cultural institutions in the Diaspora.

The research I have been conducting in Palestine, with the partial support of the CBRL, investigates the reconstruction of the Palestinian historical narrative. The research pays particular attention to the role of ordinary individuals, not only as bearers of traditions and as a rich source of information on the ethnographic character of Palestinian cultural heritage, but also as actors that memorialise their past and narrate their own history.

For three weeks in summer 2002 I conducted fieldwork in the Jenin refugee camp in the West Bank, examining how an event, taking the case of the 'Battle of Jenin', is narrativised and memorialised within multiple historical registers. The event in question occurred during the Israeli military operation 'Defensive Shield', launched in April 2002, in which the Israeli Defense Forces invaded and reoccupied the main cities in the West Bank. Organised resistance to the invasion in the Jenin refugee camp set the scene for a lengthy confrontation between the Palestinian fighters and the Israeli Defense Forces, a battle that lasted for almost ten days.

The Israeli military operation caused massive destruction to the civilian infrastructure in the West Bank, and destroyed priceless cultural heritage sites. In the Jenin camp, damage to destroyed housing totalled almost \$34 million, and left approximately 800 families homeless. In Nablus the cost of restoring the Old City of Nablus, where destruction included the Jame' Al Khadra mosque, an ancient public bath, historic houses and soap factories, was estimated at more than \$47 million (see *UNDP Focus*, Vol. 2, 2002, p. 3).

In the midst of the landscape of loss in the Jenin camp and the hollowed-out corners of the alleyways in the Old City of Nablus, ancient cultural resources were plundered, material



'Ground Zero' at the centre of the Jenin Refugee Camp. Little remains from the former hillside of houses; the destruction has left hundreds homeless

objects became metonyms and symbols of Palestinian history, and recurrent episodes of assault were aimed at the infrastructure of collective life. Under such conditions, the testimony of survivors, the voices of ordinary individuals, and the stories of everyday life not only help to fill in the gaps but become a central pillar of the official historical record.

Oral Histories

Against the ominous shadow cast over Jenin camp by the local 'Ground Zero', the retelling of the individual life histories proved at times cathartic, and others painful, for the refugee dwellers of the camp.

One of the striking findings to emerge from this fieldwork is that oral history takes on a dynamic form when examined genealogically. As it is passed down from one generation to another, oral history not only represents a rich form of social knowledge, but it also acts as a terrain in which lessons are learned from the past, making revelation as well as radical self-transformation possible.

The first generation of residents in the camp, who were expelled or fled from their homes in 1948, are now seventy years of age or older, and provide detailed accounts of the social and cultural life of that period, as well as practical details about the political defeat. But it is actually the second generation, between the ages of thirty to fifty, which retells with great precision the stories about social and cultural life prior to 1948. The same generation also situates this narrative within an explanation of the political defeat, identifying both poor political leadership and lack of organisation as root causes of dispossession.

As one political activist explained, the implication of this is that an understanding of the 'Battle of Jenin' is inseparable from the symbolic level in which history, as former lived experience, is orally transmitted. In the process it both transforms individual consciousness in the present, and provides lessons for the future. According to this activist:

What happened in Jenin broke the barrier of fear that Palestinians have carried with them since their dispossession in 1948. The Israeli invasion of the camp, the fighting, and the massacre perpetrated here, was a tragedy, but it was also bravery and heroism on our part. We have learned from the failure and ignorance of our parents' generation. We have learned not to leave our homes ever again.

For this individual and others like him, the act of choosing not to flee his home and the action of launching resistance against the most powerful army in the Middle East are examples for the Palestinian national movement. They demonstrate that gains that can be made from good leadership, as well as proper organisation and planning. Yet for the people of Jenin camp, who were not afforded protection from the international community and were faced with the inaction of the Palestinian National Authority during the Israeli invasion, this type of collective action was furnished by an *ad hoc* array of local activists in the camp.

Narrating History from Below

All over the refugee camp, in Jenin, and as far off as Zababdi, a village twenty minutes away, one observes ordinary individuals writing the history of the Battle of Jenin. Yet most of this remains in the form of 'hidden scripts', unseen by those not versed in popular cultural, as well as those unfamiliar with the texture of social life that is being reconstructed around an emerging culture of resistance.

One obvious popular cultural form is graffiti. Throughout the refugee camp, one finds wall writings adorning buildings and destroyed homes, speech acts of the weak, that convey messages of steadfastness, as well as attempting to deflect the loss and construct sense out of the violence which has stripped away meaningful collective existence.

More interestingly, one also finds popular forms of memorialisation, such as the makeshift monument erected by the local committee in the camp, on the spot where the Israeli General Mofas stood, surveying the battleground below, in the Jenin camp. The figurine, constructed out of trivial items, the property of individuals from the camp, symbolises the persistence and perseverance of the 'ordinary' in the face of the super-ordinary might of the Israeli army.

Another striking form of memorialisation, facilitated by new forms of technology, traverses oral traditions and popular cultural forms. This is a mixture of an emergent form of local folklore (telling stories), and a new culture of posters and murals that objectify and preserve the memory of local heroes. Individuals such as Zyad al-Amer, one of the local leaders of the military wing of the Fateh movement who was killed during the battle in Jenin, are immortalised in posters and murals, which can be found all over Jenin and as far as the next village. These visual forms of remembrance are supplemented by rich oral traditions of stories that extol the bravery, but also the upright moral character and astute political strategies of such figures, raising them to the level of legends and local heroes.

These forms of memorialisation represent liminal local cultural forms, that convey a double meaning. On the one hand, they recall the event and immortalise local heroes. But on the other hand, between the lines, a subtle subtext carries criticism of the Palestinian national leadership and its strategy of diplomacy, which for the people in Jenin has only produced compromises without substantial political gains.

In this sense, one of the central questions that one is left with is, will these popular forms of narrating history from below remain 'hidden scripts'? What will happen to the double meaning that these narratives convey? Will they be effaced by dominant nationalist narratives, or will they manage to inflect new forms of historical and nationalist consciousness?

Research Reports from Lebanon

Palaeolithic Reconnaissance in Lebanon and Western Syria

Andrew Garrard (University College London) and Corine Yazbeck (St. Joseph's University, Beirut)

South-west Asia is a particularly important region of the world for Palaeolithic studies. This is firstly because it provided the sole land-bridge between Africa, Europe and Asia for each of the hominid species (including modern humans), which evolved in sub-Saharan Africa. Research in south-west Asia can cast light on the timing and nature of these first colonisations. Secondly, the region has extremely diverse environments ranging from desert to well-forested mountains, and one can learn much about the adaptability of the various hominid species by comparing their strategies in these various habitats.

Within the Palaeolithic of the region, there are certain periods which have captured a lot of interest. These include the earliest Palaeolithic which contains the first traces of hominid occupation extending back to at least 1.75 million years, the Middle Palaeolithic during which south-west Asia lay at the interface between the Neanderthal and early modern human worlds, and the latest Palaeolithic which informs on the events which led to the beginnings of village-based farming — the earliest development of its kind in the world.

In spite of its fascination, Palaeolithic research in the region has been geographically restricted. This of course relates to a mixture of logistics and political factors. Over the last 25 years, the majority of field research has been undertaken in Israel and Jordan, in



'Graffiti' on the wall of a destroyed home. On the left side it states: 'when the enemy cries – it is because Zyad al-Amer is waiting'. On the right side: 'Kateb al Aqsa, Sarea al Quds, and Kateb al Kasam (military wings of factions) instill fear in the settlers'

Currently, the local committee in the Jenin refugee camp is working on plans to establish a museum. The memorial site, will, among other things, focus on the lives of the local heroes, the martyrs or 'shaheeds'. More significantly, however, three films have already been produced on the Israeli invasion of the Jenin camp. These films, produced by locals as well as Palestinian activists in the Diaspora, not only document and record the event, but provide ordinary actors in the camp with the opportunity to tell their own story, and thus to participate in writing their own history. As such, these films, mediated by changing systems of commodification, represent new cultural forms that are being produced by globalisation. The films participate in the construction of a transnational space within which the local experience of individuals in the Jenin camp, silenced and overshadowed by media conglomerates and the overarching Palestinian nationalist narrative, can be articulated publicly.

The local narrative emerging from Jenin exists in a liminal zone, at the border of non-recognition within internal and external systems of marginality. It casts critical light on the leadership of the Palestinian Authority, and it contests the mainstream Israeli narrative. Whether this narrative has the potential to affect Palestinian self-perceptions will depend on the type of cultural forms through which it is conveyed, and the extent to which it is accorded recognition within public avenues of articulation.



Andrew Garrard (left), with Sister Felix, Corine Yazbeck and Martin Bates. Sister Felix kindly provided us with accommodation in Zahlé

parts of central and northern Syria, and at a small number of localities in Turkey. Research in critical regions such as Lebanon, which lies at the centre of the 'Levantine Corridor' (the western arm of the 'Fertile Crescent'), has been on hold since 1975.

Prior to that time, Palaeolithic researchers were very active in the country. This included a succession of Jesuit scholars based at St Joseph's University in Beirut, from Gottfried Zumoffen in the late nineteenth century to Henri Fleisch and Francis Hours between the 1940s and 1970s. They undertook extensive survey as well as excavation at a number of key sites. Dorothy Garrod (University of Cambridge) was also closely involved in the late 1950s and 60s, and excavated at three major Middle Palaeolithic sites along the coast: the Adlun Caves (Mugharet el-Bezez and Abri Zumoffen), and Ras el-Kelb. Owing to ill health, she was not able to complete the analysis and publication of material from these sites. This major task was undertaken by Lorraine Copeland (Institute of Archaeology, London, and Maison de l'Orient, Lyon), who also co-authored the first 'Inventory of Stone Age Sites of Lebanon'.

Since the end of the 1975-91 conflict, several Lebanese scholars have undertaken postgraduate research on aspects of the prehistory of the country. The first to complete a doctorate on a topic relating to the Palaeolithic was Corine Yazbeck, who is the co-author of this report. She undertook her research at Lyon University, which concerned with the Lower Palaeolithic technology represented at a number of sites in the southern Bekaa Valley, particularly at Joub Jannine II. She is also co-author with Lorraine Copeland of a newly revised 'Inventory of the Stone Age Sites of Lebanon' which is due for publication in the next year. Corine is on the research staff of the newly-opened Museum of Lebanese Prehistory at St Joseph's University in Beirut, which has an excellent public display on the Palaeolithic, Neolithic and Chalcolithic heritage of the country.

The other author of this report (Andrew Garrard) also undertook his doctoral research in Lebanon. Done in the 1970s, the research was concerned with Middle and Late Palaeolithic environmental history, food procurement strategies and settlement patterns in Mount Lebanon. It included a detailed analysis of the faunal remains from Dorothy Garrod's excavations at the Adlun Caves and Ras el-Kelb. It had been Andrew's intention to continue research in the country, but because of the political situation, this was not possible for many years. However, this summer, using grants from the CBRL, the University of London and the Institute of Archaeology at UCL, he undertook a joint reconnaissance project with Corine Yazbeck. They were joined for part of the time by Martin Bates, a geoarchaeologist from the University of Wales at Lampeter with particular interests in Quaternary geology.

The first aim of the reconnaissance was to check the condition and future research potential of some of the key sites which were being investigated in Lebanon prior to 1975. Clearly, with the advancement of scientific techniques over the last 25 years, much new information could be obtained from renewed excavations. A second aim was to examine the potential for an area study (or 'landscape' project) examining the adaptations of earlier hominid and later hunter-gatherers to one of the distinctive environmental regions of the central Levant. Any such project would involve archaeological survey, excavation and palaeo-environmental investigations. Four potential areas were examined, three in Lebanon and one in western Syria.

The first area was a section of the southern coast of Lebanon and the low-lying interior hills between Sidon and Tyre. Our prospection in this area was fairly limited, but we had a close look at the condition and hinterland of the Adlun Caves, which were excavated by Dorothy Garrod between 1958-63 and on which some of the first author's doctoral research was based. The Mugharet el-Bezez has been protected by the Department of Antiquities in Lebanon and has significant deposits surviving which relate to the late Lower and Middle Palaeolithic from between 300,000 and 50,000 years ago. Renewed excavations using the full range of modern techniques could yield much new information.

The second area was a section of the northern coast of Lebanon between Batroun and Tripoli and some of the main valleys cutting eastwards into the high mountains. Three sites with Middle or early Upper Palaeolithic deposits have been excavated in this area (Masloukh, Abu Halka and Keoué), but no systematic survey has been undertaken in the valleys leading back into the mountains. Andrew Garrard found sites of interest in the higher country of the Wadi Qadisha in the 1970s, and we revisited these. Further investigations in this area would be of much interest, as little is known of Palaeolithic adaptations to the high rainfall forest regimes found in these mountains.

The third area was the south-central Bekaa Valley between the marshlands of the Aamiq and Lake Qaraoun. This area has extensive traces of early Palaeolithic occupation in proximity to former lake, river and marsh environments. Corine Yazbeck



Corine Yazbeck investigating natural source of chert which could have been used as raw material for stone tool industries

undertook her doctoral research on a number of the early industries from this area (particularly that from Joub Jannine II). Some of these could date back to well before 0.5 million years ago. Any future research in this region would require extensive coring to trace the position of Pleistocene land surfaces, as well as deep cuts to locate the source of some of the early industries.

The final area was in one of the drainage systems lying to the east of Nebk at the north-eastern end of the Anti-Lebanon Mountains. A series of impressive limestone ridges cuts through this region, and these contain many natural caves. They include the cluster at Yabrud which were excavated by Alfred Rust and later by Ralph Solecki between the 1930s and 1970s. The area forms a fertile corridor between the Anti-Lebanon highlands and the Syrian steppe. There is considerable scope for further research in this region.

As a result of our visit to these four regions, we have formulated several research ideas and are presently looking into their practicalities and discussing them with the necessary authorities. If permission is granted and funding obtained, we would hope to begin a longer-term project within the next year.

Animal Bone from Excavations in Beirut

Dominic Perring (University of York), James Rackham (The Environmental Archaeology Consultancy) and Canon Cakirlar (American University of Beirut)

This progress report summarises results obtained from the study of animal bones recovered during excavations in Beirut. The finds come from a series of sites excavated between 1994 and 1996, covering an area of approximately 3 hectares around the Souks of Beirut. Work was directed by Dominic Perring, Helga Seeden and Tim Williams, working under the auspices of the Director General of Antiquities.

The excavations were chiefly concerned with remains of the classical and post-classical city. The Persian period city saw enlargement in the Hellenistic period, initially in the wake of the Macedonian conquest and subsequently in a phase of Seleucid expansion c. 200 BC. Small courtyard houses of an Augustan veteran colony were built within this pre-existing urban framework. In the mid second century a monumental street-side portico was cut across the remains of earlier houses. The fourth century saw extensive remodelling of houses throughout most districts. This involved the creation of large aristocratic houses decorated with mosaics, marble floors and fountain courtyards. Shops and workshops occupied the street-frontages.

The developers, Solidere, met most of the excavation costs. Fieldwork was undertaken on the understanding that local funds would support post-excavation analysis, but this did not happen. Post-excavation studies are instead taking place piecemeal, drawing on a variety of research grants. The CBRL contribution to the research programme has supported a study of the animal bone, which is being undertaken by James Rackham assisted by Canan Cakirlar. The grant has allowed us to establish an environmental laboratory equipped with reference collections and materials at the American University of Beirut (AUB). This will serve as a resource for other researchers and students working within the region, and will promote the training and research involvement of graduate students at the AUB.

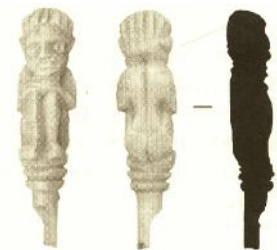
Results to date

The excavations produced surprisingly little animal bone. The assessment process recorded 45,543 fragments of hand excavated and dry sieved animal bone (this excludes fragments within residues from the processing of some 5000 litres of environmental soil samples). This total can be compared with a computerised record of over 350,000 sherds of pottery from priority contexts alone.

Most archaeological finds in Beirut were the product of a history of sorting and re-use. Few assemblages contained 'primary' rubbish. Pottery was found in abundance because of its widespread reuse as a building material. In contrast animal bone was not imported onto the site in equivalent quantities, and the majority of the bone waste produced on site (in butchery, carcass-processing, bone-working, or consumption) was probably disposed of elsewhere, perhaps through municipal disposal systems. It is possible that a proportion of the excavated animal bone may have been introduced along with the pottery as make-up and levelling material.

Hellenistic and earlier assemblages were dominated by sheep/goat, whilst Roman and Byzantine sequences were marked by an increasing preponderance of pig. Cattle bones were rare throughout, but were more in evidence in Roman period deposits when their numbers were broadly equivalent to sheep/goat. Eighth-century deposits suggest a re-occurrence of sheep/goat dominance, although with pig still in evidence. This holds true for most subsequent phases, although deposits dated to the Fatimid/Mamluk period have, not surprisingly, shown a lack of pig bones. Game was under-represented, but fish and domestic chickens were abundant. There is a broad range in the size of the fishes represented and it may be that we will be able to identify specialisation among the fisheries supplying the city.

The main purpose of the assessment phase was to identify assemblages that merited more detailed analysis. 16,869 fragments have now been recorded in a programme of detailed study, involving a single multi-field computer record for each identifiable bone fragment. Attention has concentrated on a major construction horizon within the House of the Fountains, dated AD 400/410. A total of 10,195 bone fragments were studied and recorded



Head of a bone pin, carved in the form of a squatting naked man. This was found in the fill of a robber-trench associated with a period of rebuilding, perhaps dating to the 2nd century AD

from this building phase, of which 23% were classified as unidentifiable, 44% were identifiable to species and a further 6% should be identifiable when referred against adequate reference material (chiefly the case for fish and wild bird bones).

The bones of pig exceed the bones of the other domestic mammals by a factor of 10. This is most unusual. Other Byzantine assemblages show no such dramatic abundance of pig, although this species is more frequent than the other taxa during this period. This perversity is likely to reflect on the particular source of the material and it will be of primary importance to establish whether it is a product of the selection of material for building and make-up deposits, or a real reflection of the diet in the local houses. The resolution of these questions of taphonomy will form one of the initial objectives of the detailed analysis, starting with a fragmentation analysis of the bone assemblages and the relative proportions of pottery and bone in different deposits.

Bone working

The animal bone collections are also heavily biased by the presence of a local bone tool industry. The needs of this local industry will have influenced butchery practice, evidence for which is plentiful, whilst the selection and distribution of material for bone working complicates the process of using the animal bone to reconstruct patterns of food supply and consumption.

407 objects of bone and ivory were studied. Most of the objects were craft manufactured. Several items were lathe-turned and drilled, indicating a level of sophistication in their manufacture. It is clear from the objects and the bone working waste that almost the whole range of finished bone small finds that have been recovered could have been, and probably were, made by the same workshops or traditions represented by the bone waste. These tend to use cattle bone, with occasional horse and donkey, but rarely smaller sheep and pig bones. Cattle bones, although otherwise poorly represented in the assemblages, were widely used to manufacture tools. The manufacturing waste is dominated by the larger robust limb bone elements like metapodials, radii, humeri and femora.

Conclusions

The results of the work to date have shown that considerable care needs to be taken in the selection of the final bone assemblages for detailed analysis. The manner in which the bones accumulated at the site, and the level of re-working, both on-site and from off-site, will complicate the analysis and determine the value of particular groups. The extensive ceramic database has been invaluable in this respect, and the relationship between pottery and bone within the different deposits should assist in the recognition of local domestic refuse and larger scale dumped deposits.

Excavations in Ancient Sidon

Claude Doumet Serhal (British Museum and University College London)

In 1998 permission was granted by the Lebanese Department of Antiquities for a British team to begin an archaeological excavation of the ancient city of Sidon. Sidon was one of the most important cities of the ancient Canaanite and Phoenician peoples. However, like other places in modern Lebanon, most of what we know of its history came from the written records of other ancient contemporary cultures, namely Egyptian, Assyrian, Babylonian and Greek. The excavation project is sponsored this year by the British Museum, the British Academy and the CBRL. The project has also benefited from donations from Lebanese private institutions: the Hariri foundation, Byblos Bank and Nokia Lebanon.

Ancient Sidon was known as the Tort city', 'Sidon, land by the sea' and even 'Little Sidon', and it included the huge mound or tell on which sit the ruins of a Crusader castle, the 'Castle of St Louis'. The excavations are in the vicinity of this castle and the first trenches were begun in 1998 within the medieval ditch dug during the building of the castle and its fortifications.

Important historical facts were elucidated from the previous excavations, and the 2002 fourth season is no exception. Further important additions have emerged about the history of Sidon and the archaeology of the Lebanon. A previously discovered Early Bronze Age building complex was extended and finds from here include pottery with cylinder seal impressions and pottery with applied rams' heads.

Immediately above the Early Bronze Age deposits was a substantial layer of sterile sand. This sand varied in depth from 90 to 140 cm. It was extremely fine and had been brought on site from the nearby coast, as established by the sediment analysis. Mixed with it were broken shells, foraminifera and fragments of sea urchins. A comparable sand layer also appears at the end of the 3rd millennium in Tyre, as uncovered by Patricia Maynor Bikai in 1974. Three graves of a later period than those found at Sidon were found dug into this sand at Tyre. The existence of this sand level at the end of the Early Bronze Age at both sites suggests a correlation between the two city-states and could indicate a common chronological relationship.

The density at every level of the Middle Bronze Age burials from Sidon testifies to an already lengthy use of the site by an early stage of MB IIA. This year, six Middle Bronze Age burials were discovered in this same sand. The first was a carefully built grave of a warrior, who was buried with a bronze 'duck-bill' axe. Unusually, even the wooden handle of his axe was preserved. Adjacent to the grave of this warrior was an animal bone deposit with pottery. One exceptionally fine polychrome cup with one handle of the so-called Palatial Classical Kamares was found in this deposit. This is the first time such a vessel has been found at Sidon attesting contacts with the Minoan Cretan Palace Period in the Middle Minoan II A/B period and the 13th Dynasty in Egypt. The second burial was of an infant in a jar accompanied by a pottery jug and a little painted bowl. Three further Middle Bronze Age burials found just above the sand layer, consisted of children in jars, two of them with Egyptian scarabs. One burial was dug directly into the sand. These newly found burials add to the nineteen discovered in 2001.



Adult burial from the Middle Bronze Age

Above the Middle Bronze Age level further structures belonging to the Late Bronze Age and Iron Age were found. From the latter period were two pieces of pottery with Phoenician inscriptions. This is the first time that a Phoenician inscription has been found in the centre of Sidon.

The extraordinary Sunken Room at Sidon, with internal dimensions of 4.60 x 5.70 m, was apparently dug down at least from the present ground surface, which is as much as 3.70 m above the floor of the room. It has walls that are lined with dressed rectangular blocks of slightly irregular dimensions. These dressed blocks have behind them, at least on the east and south sides, rubble stone packing that goes up to the present ground surface. When this building was constructed, it was dug down from what was then the surface right into Early Bronze Age levels, removing the sand layer, Middle Bronze, Late Bronze and Early Iron Age deposits. The east wall of the room is almost entirely missing (robbed out) except at the northern end, just before the corner, where up to five courses of stonework are preserved. The floor consists of large paving-slabs, laid in an E-W orientation. Occasionally there are long narrow slabs, laid in the opposite direction.

This building was destroyed by a fierce fire. Evidence of burning reaches a height of c. 1.08 m above floor level. Immediately above the floor is debris that contains pieces of well-levigated dark brown clay that may derive from a collapsed roof. There are other fragments of burnt material and pieces of charcoal. Above this layer, sections of carbonised beam were discovered.

Although this building was destroyed by fire, there is unfortunately very little diagnostic material in the destruction level. Sherds are scarce, and not obviously datable. An Egyptian scarab that was found in the destruction level near the floor cannot in itself be used to date the building, as it may already

have been an antique when it was deposited here. For dating, the presence of the burnt wood in the destruction level will be crucial. This will allow the possibility of carbon 14 dating and of dendrochronological analysis, both of which should indicate when the timbers were cut.

The use of dovetail clamps to hold the blocks together is particularly interesting, because this is often regarded as a hallmark of the Persian period. For example, dovetail clamps are found at Pasargadae dating from the time of Cyrus, and they also occur at Eshmun. Another distinctive feature of the Persian period masonry (although not only of this period) is the use of blocks with drafted margins on the front edge. This technique is certainly evident on one block at Sidon and again attested on the facing blocks at Eshmun. The use of the claw-toothed chisel is also typical for Achaemenid stone-working, but in the case of Sidon we cannot yet be sure whether this feature is present. Finally, the use of stone blocks is a possible indicator of the Persian Period in the Levant, and this, combined with the use of dovetail clamps, the technique of drafted margins, and the possible use of the claw-toothed chisel, all point to the sunken room at Sidon being of Achaemenid date. A Byzantine grave marker with an engraved cross was found at later levels showing that Sidon continued to be occupied in medieval and modern times.



The sunken room from the Persian Period

Research Reports from Syria

Settlement and Landscape Development in the Horns Region

Graham Philip (University of Durham), Ma'amoun Abdelkarim (Department General of Antiquities and Museums, Damascus), Michel Maqdissi (Department General of Antiquities and Museums, Damascus), Anthony Beck (University of Durham), Man'am Bshesh (Department General of Antiquities and Museums, Horns), Paul Newson (University of Durham), and Isabelle Ruben (Amman)

The project seeks to investigate long-term trends in human settlement and landscape development in an environmentally varied but poorly documented region of Syria — the Orontes Valley around the city of Homs. This was our

fourth field season and ran from 14 August to 12 October 2002. As in 2001, efforts were concentrated in the southern study area, while Dr Ma'amoun Abdelkarim of the DGAM and Paul Newson began systematic work in the basaltic landscape of our northern study area.

Southern Study Area

The southern study area is located between the Damascus-Horns highway, and the al-Asi river and Lake Qatina. Fieldwork involved visits to some 70 potential sites identified through either maps or satellite imagery. Around 80% of those located using maps were identified through indicative place-names, and the rest by the presence of

distinctive map contours. Current data suggests that for every site located using map data, an additional 1.5 sites have been located through satellite imagery. Most consisted of surface artefact scatters which appear on the imagery as areas of distinctive reflectivity.

In 2001, we suggested that the southern area might have undergone large-scale deflation through wind action. To investigate this, we sampled two palaeosols, each buried underneath ancient tell deposits. At Tall as-Safinat Nabi Noah (SHR 14) the palaeosols were buried below the rampart, which is probably of second millennium BC date. At Khirbat Kafr Musa (SHR 218) palaeosols lay below the base of the tell, which appears to have first been occupied during the Roman period. In both cases, over 1.0 m of thick truncated B-horizon was noted.

Samples have been taken for laboratory analysis so that we can reconstruct the environments in which these soils developed. One possible hypothesis might be that large-scale soil deflation has occurred since the Roman period, and that before this, soils were largely intact from the Late Pleistocene.

A series of bore-holes was used to examine the alluvial stratigraphy of the Orontes floodplain south of Lake Qatina. These indicated the presence of more than 2 m depth of alluvium in many areas, suggesting that in the valley floodplain, if nowhere else, there is real potential for the burial of archaeological sites by alluvium. Thus any survey undertaken in the alluvial zone will require rather different techniques from those employed elsewhere on the project.

In 2001 our attention was drawn to a sinuous linear feature, visible on 1960s CORONA satellite imagery, that ran for several kilometres southwards from the large ramparted site of Tall as-Safinat Nabi Noah towards the al-Asi river. Although now largely destroyed by agriculture, a stretch of this feature was investigated in August 2002. It proved to be a channel, and contained grey silt deposits, which were quite distinct from the surrounding dark red, calcareous soils. Although some 20-30 m in width, the channel was no more than 60 cm deep, with the bottom lying on the white marl bedrock. Resting on the marl and sealed below the grey silts lay a deposit of gravel indicative of the deposition of sediment from flowing water, and many freshwater mussels shells of species found today in the al-Asi river and Lake Qatina. Clearly, the channel once carried water from the river. Radiocarbon dates from the shells will provide a date for the final use of the channel.

Northern Study Area: the basaltic zone

The northern study area is located north of Horns and extends westwards from the Damascus-Rastan highway for some 12 km, across the al-Asi river and into the basaltic terrain west of the river. In the basalt settlements were built using stone rather than mud-brick resulting in a very different archaeological record from that of the southern area.

One of our aims was to assess the feasibility of using Ikonos imagery as a mapping tool. To do this, the co-ordinates of features such as the corners of walls, intersections, and clearance cairns were recorded in the field using hand-held GPS. These were then plotted over Ikonos imagery that had been geocorrected using ground control-points. This revealed that it was indeed possible to identify these features readily on the imagery. The conclusion is that with suitable geocorrection, Ikonos panchromatic data offers a fast and

accurate way of mapping large-scale archaeological features such as field systems, ancient land divisions and the distribution of cairns and tumuli. This technique is likely to play an increasingly important role in facilitating the rapid recording of threatened landscapes.

Our other main aim was to assess the range of evidence for human activity which is preserved in the basalt landscape, and ground investigation quickly revealed its richness. Features identified included several stone-built Byzantine villages, some in a wonderful state of preservation, a major Neolithic occupation, stretches of Roman road, occasional inscriptions, and buildings which might be best understood as villas or isolated farmsteads. Dr Abdelkareem continued his work on the Roman cadastration of Horns, for which he is using both aerial photography from the French Mandate, satellite imagery and recent photographs taken from helicopter.

Interpretation

Off-site survey produced a considerable number of Palaeolithic artefacts, including Lower Palaeolithic handaxes and choppers, and large quantities of Middle Palaeolithic Levallois material. The raw materials used are predominantly cherts, obtained from the ancient conglomerate river terraces.

While evidence of prehistoric settlement had previously proved evasive, the situation changed following a period of intensive field-walking close to the al-Asi river. This revealed the presence of a scatter of prehistoric artefacts covering many hectares, in fields to the east of the small prehistoric tell of Arjun, a site which was excavated more than twenty years ago as part of the work undertaken at nearby Tell Nebi Mend. The scatter appears to include both aceramic and ceramic Neolithic, as well as Chalcolithic material.

More surprising however, was the identification of an extensive area of prehistoric activity in the basalt (Site 666). While the sparse ceramic remains consisted mainly of body sherds of a coarse basalt-tempered ware, the chipped stone, which included occasional fragments of worked obsidian, points to a Neolithic date. This site was first identified from satellite imagery where it took the form of a mass of walls which stood out because they were quite different in shape from the orthogonal arrangement which characterises the Roman field systems.

The majority of the many artefact scatters recorded by the project date to the Roman and Islamic periods, and indicate



Roman limestone altar, found in field near Arjun, just south of Lake Qatina

that the area contained numerous small agricultural settlements at this time. The apparent expansion of agricultural settlement may be related to the problems of soil loss discussed above. Of particular interest was the discovery near Arjun of two Roman limestone altars each around 1.5 m high.

Previously we had suggested that with the exception of Palaeolithic debris, there was little evidence for off-site material. This was confirmed during 2002, when 5 sq km of off-site transects were walked by teams spaced at 10 m intervals. While Palaeolithic material was present throughout the area the distribution of other material was very limited.

As always thanks are due to the staff of the Syrian Department General of Antiquities, who have helped our project in many ways, to our sponsoring body the CBRL and to the British Academy, which is supporting work in the basalt landscape through its Larger Research Grant scheme.

Studies at Jerablus, North Syria

Edgar Peltenburg (University of Edinburgh)

During March and April 2002, a team from the University of Edinburgh made great strides in processing and studying material from its excavations at a 'Carchemish mound'. The excavations had been conducted during the 1990s as Britain's contribution to the international salvage programme in the Tishreen Dam area, along the upper Syrian Euphrates River. The dam created a lake some 60 km long, and the site of Jerablus Tahtani lay at its northern end.

We amassed a backlog of finds to be processed because of the rescue work in which all efforts were expended on the judicious excavation of as much as possible before the site was flooded. In the event, Jerablus Tahtani was not flooded, and it now stands near the northern shoreline of the lake.

The finds are kept in the Project's dig-house in the border town of Jerablus. In fact, the house is located on the low rampart of the Outer Town of ancient Carchemish. This is an immense site which straddles the Syrian-Turkish border and is bisected by the rail line made famous by the Orient Express. Work on the roof of the dig-house is punctuated by the rattle of trains crossing the eight spans of the Baghdad rail bridge which, as so vividly reported in the letters of T E Lawrence, was constructed in the early twentieth century.

Analysis of recovered materials from this multi-period site is designed to answer specific questions that form the basis of the two final volumes now being prepared for publication. During our study season, Mark Hewson of the University of Birmingham was out on site most days to check the stratigraphy at the southern gateway into the Early Bronze Age fort of the mid-third millennium.

Most work was confined to the dig-house. Phil Karsgaard of Edinburgh studied the mid-fourth millennium pottery before joining the excavations at Tell Brak. The bulk of the large amounts of pottery was analysed by Rachel Conroy and Sally-Ann Jones of Manchester, and by Paula Wallace. Diane Bolger (Edinburgh) supervised this aspect of our research. Most of the pottery is classic Late Uruk and Early Bronze Age. Carole McCartney of the Lemba Archaeological Research Centre in Cyprus joined the team to assess the chipped stone. Andrew McCarthy, Edinburgh, worked on the small finds and later went on to join the excavations at



Pottery processing on the roof of the Jerablus dighouse

Tell Leilan. Peltenburg prepared the prolific Early Bronze Age tomb material for publication in the first volume of results.

Throughout our time in Syria, we were given every assistance by the Syrian Directorate General of Antiquities and Museums and the government's representative, Mr Mohammed Ali. It is also a pleasure to record our warm thanks to the people of Jerablus who helped the team achieve its goals in such an enjoyable manner.

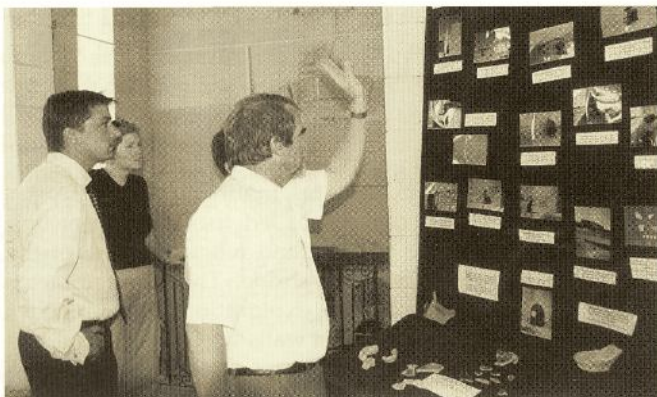
The Dayr Mar Elian Archaeological Project

Emma Loosley and Daniel Hull (University of York)

The Dayr Mar Elian Archaeological Project was first suggested in April 2000 when the monastic community of Dayr Mar Musa, An-Nabk, Syria, took on responsibility for the neighbouring monastery of Mar Elian esh-Sharqi (St. Julian of the East) in the village of Qaryatayn. In 2001 we carried out a short survey season to assess the viability of an archaeological project at the site, and in June 2002 the first season of fieldwork commenced. The project is an Anglo-Syrian project with the British part of the team based at the University of York.

Dayr Mar Elian is 1 km west of Qaryatayn, a village of approximately 25,000 inhabitants in the Syrian desert. The presence of an oasis means that the site has been occupied for many millennia, and a substantial tell stands at the southernmost point of today's cultivation. Although the village has been a staging post on the Damascus-Palmyra road since antiquity (it was on the Roman *limes*), it does not ever seem to have been a notable trading centre. Instead local people appear to have concentrated on agriculture as they do today, the settled villagers cultivating olive trees, vines, fruit trees, nuts and a wide selection of vegetables whilst the *bedu* who use the village as a winter base herd sheep and goats.

The monastery (Dayr) Mar Elian is located approximately 7 km north-east of the tell and the original settlement. Why it was built in exactly this location is still unknown. The local people believe that the site was chosen by the oxen carrying the body of the saint on a cart, who refused to move when they reached the place that is now the monastery. However the enclosure is located in the vicinity of several *qanat*, and is near a riverbed that collected rainwater draining off the nearby mountain range. Therefore water would not have been a problem and the site was sufficiently far from the village to allow a contemplative life, whilst near enough to



Visit of H M Ambassador, Mr Henry Hogger, July 2002

facilitate trading and a reduced amount of social interaction.

The monastery is thought to have been established in late antiquity. We do not have an exact date, but the neighbouring monastery of Dayr Mar Musa is attested to in a manuscript now in the British Library dating to 575. The early sources are silent on the subject of Mar Elian and the first textual reference is an inscription in the church of Dayr Mar Musa dating to 1176. Some early objects found at the site suggest that the foundation has its origins as early as the sixth century, but Mar Elian only truly emerges from obscurity in the sixteenth century when it became an episcopal seat and a thriving centre of monastic artists.

This cultural and ecclesiastical influence seems to have waned by the end of the eighteenth century. Despite this, the shrine remained a centre of local devotion, with both Christians and Muslims believing in the efficacy of the man the Christians call Mar Elian and the Muslims Sheikh Ahmed Khouri. This devotion was lent a strong physical expression in 1938 when a local man wanting the saint to bless his marriage with children re-built the monastery church. In the 1960s and 1970s several local families occupied the site, but the collapse of most the mudbrick buildings in 1983 meant that it was then abandoned, except for occasional church services and retreats, until we arrived at the site. Some new concrete rooms were built on the site of the former mudbrick rooms in the 1990s and the cemetery extended, but the majority of twentieth-century development around the site has been agricultural plantations around the monastic enclosure.

The Architectural Remains

The monastery as it stands today comprises an enclosure, 38 m north-south and 44 m east-west, with a church to the north, cemetery to the west, accommodation to the east and south, and an entrance in the centre of the south wall. The enclosure wall, standing up to 6.5 m in places, is largely of mud brick with four courses of a limestone rubble foundation, and a covering of mud and straw.

At the south-east corner of the enclosure is a 2-storey mud brick tower which, though apparently typical of a vernacular style common throughout the al-Qalamūn, is of ambiguous date. The accommodation block standing along the eastern edge of the enclosure is concrete and was constructed after the collapse of the previous mudbrick rooms in 1983.

The current church, which was constructed in 1938, was preceded by a smaller, mudbrick structure. Indeed, the materials used in the modern church have shrunk subsequently at differing rates, leaving architectural scars

visible beneath the modern plaster. These scars indicate that elements of a mudbrick structure have been incorporated. This may be corroborated by the fact that the limestone sarcophagus of Mar Elian referred to above stands at a much lower level, c. 1.5 m below the floor of the nave, suggesting that this area may have been preserved through centuries of alterations as a form of sanctuary to house the tomb.

The monastic enclosure does not stand alone within the landscape. Despite its relative isolation on the edge of the village, it is set within a series of what appear to be agricultural enclosures, defined by mud brick walls, which cover collectively an area of about 60 hectares. Today, the enclosures closest to the monastery are unused, but those further afield yield olive and almond crops. The area immediately to the west of the current enclosure has been used, since the 1980s, as a cemetery for the Syrian Catholics of Qaryatayn.

The 2002 Fieldwork Season

The season began with a geophysical survey of the cloister and its environs. As mentioned above, Dayr Mar Elian stands within a series of agricultural enclosures. Ascertaining whether the remains of further enclosures exist beneath the modern ground surface is an essential part of understanding the spatial context of the monastery through time. We cannot be sure whether agriculture has always filled such enclosures, or whether other activity zones or structures existed at different times. Moreover, it is important to examine the nature of the landscape prior to the construction of the foundation; perhaps settlement patterns were in evidence here which pre-date the monastery. It is within the context of these questions that it was decided to carry out a geophysical survey within and immediately around the current cloister area. In this case it was decided that a magnetometer (fluxgate gradiometer) survey was the most appropriate method, given the speed of ground coverage and the lightness of the relatively small scale hardware required.

Some difficulty was presented due to the abundance of modern metal. In the less contaminated areas, some archaeological features were visible. To the north-west of the



Entrance to Dayr Mar Eilan

monastery, for example, a large, oval dark shape was discernable which was caused by the discarding of burnt material within a depression. It seems this was a well, still active in the 1950s, and visible on aerial photographs taken in 1958 and given to us by the Syrian Directorate General of Antiquities and Museums (DGAM).

The most interesting aspect of the magnetometry was that in general, very few features were visible. This negative evidence would suggest that Dayr Mar Elian has arguably always stood isolated from the main village of Qaryatayn, without the kinds of extensive enclosures or settlement patterns which may have linked it, at least in spatial terms, to the village as a whole.

A 3 x 5 m excavation trench was positioned at the east end of the current church. This location was selected so as to seek evidence for any pre-existing structures, especially of an ecclesiastical nature.

The environmental work was overseen by Stephen Rowland. It was decided to pursue an intensive strategy this year, with the first 30 litres of every context subjected to flotation. This proved highly successful in terms of artefactual and ecofactual recovery (particularly very small bone fragments, small but complete bones such as those of fish and rat, and both charred and uncharred plant remains). A set of archaeobotanical samples has been submitted to Dr Amr al-Azm at the DGAM for processing.

The trench reached a depth of 1.04 m. A series of architectural elements, floors and destruction layers were encountered which can be accounted for in five phases. Although still unproved elements concur with the destruction of the previous church in the 1930s, to make way for the current structure completed in 1938. It is still unclear to what extent the contemporary church incorporated elements of previous structures.

Research Reports from Cyprus

Symbolic and Ritualistic Expressions in Aceramic Cyprus

Jessica Hietasaari Andersson (University College London)

For two weeks in September 2002, I undertook a research tour of archaeological sites, research centres and museums in Cyprus, the purpose of which was to collect data for my PhD research at UCL. It was funded by travel grants from the CBRL and the Tessa and Mortimer Wheeler Memorial Fund.

This project is a contextual investigation of symbolic and ritualistic expressions in late Epipalaeolithic and early aceramic Neolithic Western Asia (Levant, Anatolia and Cyprus). I am focusing on how the use of symbolic artefacts and the employment of rituals changed as society changed from hunting and gathering to settled agriculture with animal domestication. The symbolism and rituals are investigated in relation to human life conditions of this particular time, in other words how people probably experienced their lives in relation to factors such as health, population structure, fertility, infant mortality and diet.

It seems that the use of symbolic artefacts such as human figurines and engraved/incised stones, as well as many rituals such as mortuary behaviour, were connected to

The Syrian members of the team, led by Wouroud Ibrahim of the DGAM, walked over the squares laid out for the magnetometry to pick up and quantify the surface ceramics around the cloister.

Conclusion

The 2002 season proved fascinating on all fronts. Conversations with local people led to many interesting observations about the cultural and religious value of the site as an important regional shrine. The magnetometry suggested areas for future exploration, the trenches provided a complicated array of walls suggesting frequently changing occupation levels and uses of the site, whilst the surface ceramic survey indicated usage of the site back to the Byzantine period.

In the 2003 season we intend to continue with a survey of the wider region around the monastery in order to place the foundation firmly within its geographical context. Within the environs of the cloister excavation will continue on the test trenches to find out more about the daily life of the monastery.

Acknowledgments

This project would not have been possible without the generous financial help of the CBRL, the Foreign and Commonwealth Office, the Society of Antiquaries and the Fellowship of St Alban and St Sergius.

In Syria thanks must go to the DGAM, particularly to the Director, Dr Abdal Razzaq Moaz, the Director of Excavations, Dr Michel Maqdissi and to Miss Wouroud Ibrahim. His Excellency Mr Henry Hogger, H M Ambassador to Syria, was exceptionally generous in his time and assistance. Finally the monastic community of Deir Mar Musa must be thanked for their exceptional hospitality and friendship.

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concerns for human life conditions of the time rather than functioning within a more 'structured religion'. Examples of such rituals may have included birth rites, initiation rites, magic related to the treatment of human illnesses, or to subsistence strategies such as hunting and the fertility of crops.

The purpose of my research trip to Cyprus was to examine how the island seems to have fitted into what was in many ways a shared and integrated symbolic world in the early aceramic Neolithic period in Western Asia. Human life conditions as well as the use of symbols and rituals changed as people first moved from a hunter-gatherer way of life in the Epipalaeolithic to the start of plant and animal domestication and settled villages in the aceramic Neolithic.

The colonisation of Cyprus in the early aceramic Neolithic provides us with a further stage as people adapted to island life and changing conditions. In many ways the symbols and rituals seem to change when people reached Cyprus, but some intriguing rituals continued, and by studying these changes and similarities we may move somewhat closer to the understanding of the symbols and rituals in the first place.

The first traces of humans on Cyprus are found on a rocky outcrop at Akrotiri *Aetokremnos* just by the water edge on the southern peninsula of the island. This seems to represent an isolated occurrence of humans on Cyprus. The next phase of human occupation is not evident until about 1000 years later at the recently discovered site of Parekklisha *Shillourokambos*. The site has yielded intriguing archaeological material such as a large enclosed pen probably for animal keeping, deep wells, and symbolic artefacts such as human figurines, figurines with dual symbolism (human-feline), incised stones, and secondary burials.

Other sites from this time include Kissonerga *Mylouthkia* where the remains consist of five deep wells, pits and a structure. The wells seem to have been filled purposely at the end of their use, and one of them revealed human bones of several individuals of different sex and age (including a cranium of an adult male) together with several complete unbutchered carcasses of sheep and goats (see Peltenburg *et al.* in *Levant* 33, 2001). The phenomenon of placing animal bones in association with human burials was present throughout Western Asia at this time, and its meaning seems intriguing.

Another early Cypriot site is Kalavassos *Tenta*, which is a farming village consisting of round structures with internal piers probably used for supporting a second storey. There are burials under house floors, and there is symbolic evidence in form of figurines as well as wall painting depicting a human with raised arms. At the top of the site there is a large round structure with internal cells that has close similarities to a structure in Jerf el-Ahmar, Syria, and which may represent a specialized building within the village.

Six kilometres from Tenta is the aceramic Neolithic village site of Khirokitia *Vouni* with a date slightly later than the sites mentioned above. This large village (1.5 ha) has remains of round domestic structures, internal features and burials, and there are many human figurines and other symbolic artefacts. Khirokitia is located in a fairly defensive location on a hilltop with a wall running around the village.

My research tour in Cyprus included visits to the aceramic Neolithic sites mentioned in this report. I wish to express my gratitude to Ian Todd in Kalavassos, Paul Croft at the Lemba Archaeological Research Centre, and Eddie Peltenburg. I should also like to thank Andrew Garrard, Sue Colledge, Alain Le Brun, Alan Simmons and George Willcox for advice prior to my research trip.

Artefacts from the aceramic Neolithic Cypriot sites were studied at the Cyprus Museum in Nicosia, Larnaca Museum, Limassol Museum, and Paphos Museum. In Nicosia I visited the Cyprus American Archaeological Research Institute and used its extensive library, and I wish to express thanks to the helpful staff there.

Lemba Archaeological Project Western Cyprus Survey

Diane Bolger (University of Edinburgh)

Since the 1930s, when Dikaios published the famous cruciform figurine from Yialia, western Cyprus has been known for the density and richness of its Chalcolithic sites (c. 3800-2400 BC). However, systematic work to deal explicitly with the challenges mounted by the existence of these flourishing populations was not pursued until the 1970s. That

was when the Lemba Archaeological Project (LAP) began a programme of multi-site excavations within a single cluster of sites in the northern Ktima Lowlands of the Paphos District, as well as survey within the larger area of western Cyprus. LAP has its homebase at the University of Edinburgh and its research base at the Lemba Archaeological Research Center near Paphos. The director of LAP, Prof Edgar Peltenburg, is in charge of the survey operations outlined here.

In 1975, when the project began, we realised that the discrete communities we were excavating at Lemba and Kissonerga could only be understood by contextualising them within networks of regional interaction — social, economic, political — and their natural and built environments. Since there were no excavated western settlements outside the Ktima Lowlands in the 1970s-80s with which to compare our data, we made survey of prehistoric sites in the Paphos District an integral part of the project's research design from its inception.

Surveys were carried out annually from 1976 to 1985, with resurvey continued intermittently from 1985 to 1998 in order to resolve specific problems or as part of watching briefs. Resurvey was then done intensively in 1999-2000 to refine our understanding of certain key sites in the light of advances in our knowledge and landscape changes. Fieldwork was completed in 2000, and study seasons during August and September of 2001 and 2002 have been devoted to analysing and recording the finds. With all of the information recorded and processed, we are now moving toward the final publication of our results.

We now know of about 200 sites of Late Neolithic and Bronze Age date from the 1400 km² of Western Cyprus, and can begin to evaluate the prehistoric settlement system. Initial spatial analysis of a sub-sample of about 20 of the better known sites, for example, suggests the existence of a twofold division of Chalcolithic site sizes in the west. A group of larger sites is confined almost exclusively to low elevations, below 50 m above sea level. Members of this large size group do not occur inland where we find the second group, comprising sites of less than 2 ha. While there are more sites of this group at higher elevations, consideration of size refines our understanding of the pattern. This demographic division is often repeated from the time of close relations between Cyprus and the Aegean, especially in the Late Bronze Age, but it remains to be seen why in this case it happened much earlier.

The material from the survey is being published by members of the LAP team: Dr Diane Bolger (ceramics); Dr Carole McCartney (chipped stone); and Mr Adam Jackson (ground stone). Joining us for the 2002 study season was Dr Fryni Hadjichristofi, an expert on Cypriot ceramics of the Hellenistic, Roman and Medieval periods. Together the LAP survey team has generated the detailed evidence necessary to achieve our research aim of assessing in detail the regional interactions in Paphos District during the Neolithic, Chalcolithic and Bronze Ages, as well as gaining a better idea of the settlement history of the west of the island during the Iron Age, Classical and Medieval periods.

Since pottery from survey yields relatively few diagnostic shapes or painted designs, fabric analysis has proved to be the most informative and reliable elements in the study of the prehistoric pottery from our survey. In addition to providing a good general indication of the chronological relationships between sites, fabrics give us clues to many of the fundamental processes of pottery production. These



The Chalcolithic site of Chlorakas-Vrysoudhia in 2001, before bulldozing

include clay sourcing, selection and preparation of clay and tempering materials, techniques of vessel manufacture, and firing methods. Macroscopic examination of fabric types is being supplemented in our survey by chemical and petrographic analysis of selected sherds from our survey sites.

The emphasis given to fabrics here has not been adopted in other regional surveys on the island, perhaps on account of a widespread assumption that potters tend to exploit local clay sources and that fabrics will tend to vary considerably, even within a circumscribed region. Preliminary results of the analysis of pottery from LAP survey sites show this assumption to be unfounded, since fabric types overlap between regions, and not always in a mechanical 'fall-off' pattern related to distance between sites. Actual patterns of variation are much more complex and thus serve to underscore the complex nature of interaction in prehistoric societies, even prior to the emergence of more complex state-level societies during the later Cypriot Bronze Age.

In order to see if the local and regional trends in pottery technology hold true for other categories of artefacts, similar analysis is being applied to a second important class of artefacts, chipped stone tools. In past surveys on Cyprus and elsewhere, the collection of chipped stone has often been considered relatively unimportant since it was assumed that chipped stone tools lack chronological markers and are thus not useful for dating purposes. Survey samples were generally represented by a few highly recognisable formal tools or aesthetically pleasing pieces considered significant by the non-specialist.

Our survey differs by placing the investigation of chipped stone on an equal footing with more traditionally based aspects of material culture. During our final fieldwork seasons (1999-2000), we adopted a method of total surface collection, thereby generating assemblages of chipped stone of sufficient size and quality to permit intra- and inter-site comparison at significant levels of detail. While problems of sample bias associated with surface collections need to be recognised, the collection of survey assemblages across a wide geographic area serves as an important tool for evaluating and contextualising evidence provided by excavated assemblages such as Kissonerga, Mylouthkia and Lemba.

Over the next months, the various specialist reports will be completed in first draft form, with final drafts to be completed during a 'conference' session of discussion and writing in Cyprus during the summer of 2003.

In addition to providing a clearer picture of the evolution of settlement in the west during antiquity, the work of the LAP



Chlorakas-Vrysoudhia in 2002, after destruction by a prospective developer

survey over the last quarter of a century serves as a sobering testimony to the steady destruction and disappearance of the archaeological record of western Cyprus in the face of widespread development. Considerable damage has already been done to many ancient sites, especially in and around Paphos and other coastal areas, as the result of unregulated and often illegal building activities. As tourism and hotel construction begin to escalate at unprecedented rates, the cultural heritage of all areas of the island is being increasingly threatened.

This year, for example, we witnessed the destruction by prospective developers of the important Chalcolithic site of Chlorakas *Vrysoudhia*, the only settlement of the Lemba cluster which has not been excavated. Our scholarly obligations to publish our material are thus accompanied by the equally pressing need to do what we can to help preserve and rescue the rich remains of the past from the hands (and bulldozers) of developers.

For more information, see
<WMrw.arcl.ed.ac.uk/arch/lemba/homepage.html>

Troodos Archaeological and Environmental Survey Project

Michael Given (University of Glasgow)

The Troodos Archaeological and Environmental Survey Project (T/ESP) is studying the relationship between people and their environment from the Neolithic to the Modern period, in a 160 sq km survey area on the northern slopes of the Troodos Mountains in central Cyprus. It is directed by Dr Michael Given (University of Glasgow), Dr Vasiliki Kassianidou (University of Cyprus), Prof A Bernard Knapp (University of Glasgow) and Prof Jay Noller (Oregon State University).

T/ESP is very grateful to Dr Sophocles Hadjisavvas, Director of the Department of Antiquities, for permission to carry out this survey. We also thank the people of Tembria, Katydhata and other villages in the survey area for their help and hospitality during the season. We wish to thank all of the institutions that funded our 2002 season: the Arts and Humanities Research Board, the British Academy, the Institute for Aegean Prehistory, the CBRL, the Carnegie Trust for the Universities of Scotland, the Society for the Promotion of Roman Studies, and the American Schools of

Oriental Research. Our 42 fieldwalkers and specialists worked hard and cheerfully during a long and busy season, and we are very grateful to them all.

Karkotis Valley

The Karkotis Valley around Katydata and Skouriotissa is rich in material from the Bronze Age to the Modern period, mainly due to the rich copper sources at Skouriotissa and the well-watered and fertile soils of the valley. During the season we carried out six east-west transects, 500 m apart, across the valley: these complement the three transects done last season.

Block survey and geophysical survey at Katydhata Laonarka showed that the concentration of Early and Middle Bronze Age pottery was highly localised, with a full range of Red Polished wares suggestive of a settlement. Resistivity survey carried out in part of this area suggested a sizeable architectural component that included a 30-metre long wall. Bronze Age material is not restricted to the cemetery and settlement at Katydhata *Laonarka*, but is spread in a relatively even but light distribution right across this part of the valley.

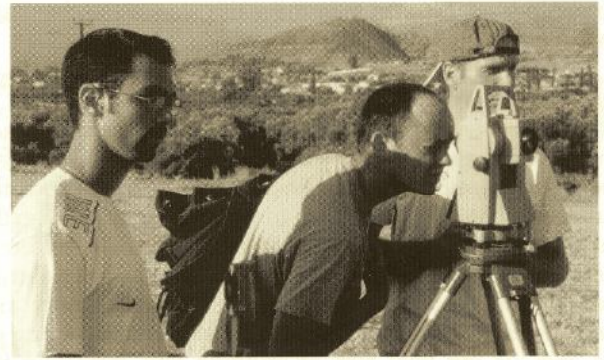
The most notable component of the Iron Age is an Archaic rural sanctuary at Katydhata *Pano Limna*. This lies on the western edge of the valley opposite Katydhata village, and occupies a small spur overlooking the valley. Along with an adjacent Late Roman settlement, we mapped the entire area with a total station, and sampled the material with a grid of 95 squares that followed what seemed to be building terraces. The sanctuary itself had clearly been built up with imported soil, and the terracotta sculpture ranged from 'snowmen' figurines about 12 cm high to sherds of life-size terracotta statues.

The highest proportion of material from this part of the Karkotis Valley can be dated to the Roman period. Skouriotissa *Pseftas* was a scatter of Late Hellenistic and Early Roman pottery. The wide range of table wares and lamps, alongside the lack of utility wares, suggest that this material probably results from a series of washed out or looted tombs. The finds from Katydhata *Pano Limna*, just adjacent to the Archaic sanctuary, definitely came from a Late Roman settlement: a wall with *in situ* pottery was exposed in a fresh bulldozer cut, and a wide range of utility wares and tiles was recovered there. Just north of the settlement we mapped and sampled 12 tombs clearly associated with the settlement.

The most striking Roman site in the Lower Karkotis Valley is the 330 m long slag heap at Skouriotissa. During the season we mapped the entire slag heap in detail with a total station, and by means of metric photography produced accurate drawings of all the main exposed sections. There were large



Team Central fieldwalking in the rich red soils of the Potami area.
Photograph: Chris Parks



Topographic team mapping the Early/Middle Bronze Age site of Katydhata Laonarka: Melios Agathangelou, Stephen Oigney, Gary Thompsett. Photograph: Chris Parks

amounts of pottery in these sections, particularly tiles and transport amphorae, but also table, utility and cooking wares. The dates of this pottery indicate that most copper mining and smelting took place during the Late Roman period. This represents an input of labour, resources and organisation on an enormous scale.

Potami

The Potami Intensive Survey Zone in the northeast part of the T[^]SP survey area is important for its position adjacent to the Mesaoria Plain and for its very weathered red soils and the age of its surface. Unfortunately the combination of standing stubble and straw left lying in the fields meant that visibility was exceptionally poor, mostly too bad to carry out useful survey. Two 'keyholes' consisting of a few ploughed fields were available, so we carried out block survey to gain an initial impression of what material might be in the area. Although there was very little pottery, we did find two areas with considerable quantities of ground and chipped stone tools. One of these may well be a seasonal camp for the intensive production of cereals, perhaps from the Pre-pottery Neolithic.

Xyliatos

T/ESP's other main research area in the 2002 season was the Lagoudhera Valley between Xyliatos and Vyzakia, in the region of the modern sulphur mine of Memi. We carried out one north-south transect to the north of the mine to complement the two done in this area last year. This produced very little pottery, but we did record several check dams, a stone-lined well, a jasper quarry, a possible collapsed field shelter, a mining adit, and a substantial path. The team then carried out block survey along the valley southwards from Xyliatos *Mavrovouni*. This more purposive method of survey produced a few traces of Chalcolithic and Bronze Age material, and demonstrated that there was considerable activity in the area during the Roman period. This was clearly associated with copper mining and smelting activities in the area. The discovery of a mining adit in this part of the valley, plus another two in a transect to the south, simply accentuates the significance of ancient industrial activity in this part of the survey area.

We carried out geophysical survey in four fields round the slag heap at Xyliatos *Mavrovouni*, and preliminary results suggest that there are structural elements which do not conform to the present alignment of field wall boundaries. More intensive collection was made from one of these fields by means of 36 two-metre circles, and produced an impressive range of heavy and light utility forms such as transport and storage vessels, almost all dating to the Late

Roman period. Fresh cuts in the south side of the slag heap produced considerable quantities of furnace material.

Conclusions

2002 was a highly successful season. The field teams made impressive progress across the landscape, whilst the artefact specialists kept up with the huge amounts of material the teams brought in. At the same time as the fieldwalking, the various project specialists worked on their different disciplinary areas, particularly archaeometallurgy, architecture, geobotany, geomorphology, oral history and the water distribution system. We are currently working on the onerous but vital task of auditing and correcting the database, and beginning to plan our last full field season, which will take place in summer 2003.

Politics and Archaeology in Cyprus

Angela Michael (University of Glasgow)

Having been fortunate enough to receive a CBRL travel grant, I booked a ticket for Cyprus and left gloomy Glasgow for two months in sunny Cyprus. The last five weeks were spent on the exhilarating T/ESP project, while the first three were spent doing fieldwork for my PhD, which is on the theme of nationalism, colonialism and archaeology on Cyprus. Over the course of the first few days I found myself trying to get information and help from the Department of Antiquities. This process can take longer than one would think, with endless hours spent waiting to be seen, helped, or shooed away! While in Nicosia I also made a number of visits to the CAARI library, which proved to be an invaluable source of information, books and articles, as well as being full of interesting people.

Much of my time in Cyprus was spent visiting archaeological sites and museums. As well as seeing what was on the ground or in the display cabinets, I was also very interested to see how the past was being displayed and who it was aimed at. There were also a number of surprises — both pleasant and unpleasant. The Roman Hotel in Paphos, for instance, was a gaudy reminder of how lucrative a strong archaeological heritage can be, while the somewhat subdued but beautifully presented Ethnographic Museum in Dherinia was a joy to behold. Indeed while at this lovely museum I was told about the man from my parent's village who used to go to Dherinia to sell olive oil and who stayed at that house — this man turned out to be my great uncle! It was interesting to note that this museum relied on organised tours for the majority of its visitors, but also did a sterling trade in civil marriages (mostly for foreigners, not Cypriots).

Other heritage sites and museums tended to be informative and often spectacular. The village of Fikardhou in the Troodos mountains was absolutely stunning, providing beautiful views and traditional architecture. It was also interesting to wander through the old part of Nicosia to see governmental rejuvenation of the Chrysaliniotissa district and the surrounding areas. This showed a timely renewal of interest in the more recent past of the city, while excavations were taking place near the Archbishopric at what is thought to be the first Lusignan palace.

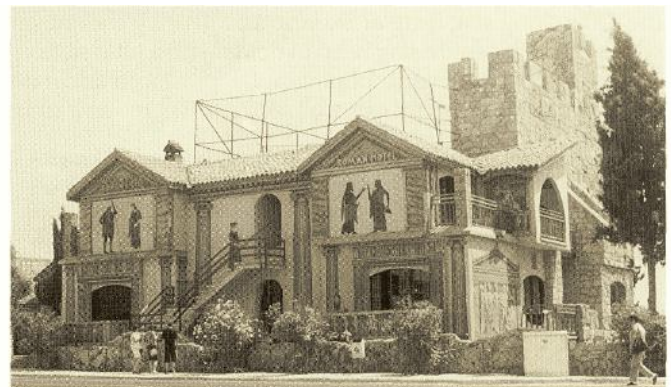
The hugely impressive Paphos mosaics seemed to be firmly on the average tourist map (which might explain the appearance of the Roman Hotel a few minutes down the

road). The Paphos 'heritage park' was quite disappointing, as it was in a state of construction when I visited — new broken columns were being erected and there were trays of tesserae under tents alongside half finished mosaics. While the mosaics at this site are spectacular in their own right it seemed as though this was not enough. This left the impression that an archaeological theme park was under construction.

There was a similar impression at Kourion, where the theatre was being wired for electricity and much of the basilica area was out of bounds (although this did not stop large groups jumping the fence and wandering around freely). Kition, on the other hand, was almost completely deserted, with very little information to explain what was there or what one was looking at; there were no English language guides to the site in stock when I visited. Perhaps this lack of visitors and information has to do with the fact that the site is scattered through the modern town, making it harder to present than an archaeological park of the likes of Kourion and Paphos.

On another occasion I visited Paul Åström's excavations at Hala Sultan Tekke. I was taken there and shown around by one of the Larnaca Castle Museum guards, Kyrios Petros, who had worked with Åström for years and who was an invaluable source of help and information. On our return to the castle he showed me around and then gave me a deliciously refreshing glass of homemade lemonade. Generally the museum and site staff were very friendly and obliging. The guard at the Larnaca Archaeological Museum, for instance, was clearly confused as to why anyone should want to spend as much time in the pre-Phoenician galleries as I was, but he stayed open a little later than normal so that I could finish making notes on the displays, objects, and information boards that were presented.

One of the aims of my trip was to talk to people about the archaeology of Cyprus and its portrayal in the press, education, the tourist industry and the mass media. This aspect of the trip was incredibly useful and I was able to talk to a number of people in the fields of archaeology, heritage studies, and the mass media, as well as your average man/woman on the street (or in the archaeological site or museum). People were genuinely friendly and helpful, and quite happy to tell me their stories and opinions about everything from football to the invasion to antiquities looting. Overall the trip was very enjoyable and truly invaluable in the opportunities it provided and in the way that it helped to formulate my ideas and provided information for my research.



The Roman hotel, Paphos

Grants

The CBRL usually has funds each year to support research projects in the Levant. Travel grants are also available to help students conduct smaller research projects in the region. Applicants are invited from either British citizens or those ordinarily resident in the UK. Application forms are available from the UK Secretary from the end of August each year. Completed forms should be returned no later than 15 December (research grants) and 15 February (travel grants).

For further information, see: <http://www.britac.ac.uk/institutes/cbri/grants.htm>

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Front cover picture. Tomb of Germanus at Birketein north of Jerash. APA99/SL8.9,14 August 1999). See article by Kennedy and Bewley)
Back cover pictures. Top — View of Qadisha Valley in northern Lebanon (see article by Garrard and Yazbeck)
Centre — Middle Bronze Age jar burial of infant, Sidon (see article by Serhal)
Left — Memorial of the 'Battle of Jenin' (see article by Tabar)
Picture on spine. Fieldwalking in a maize field, Cyprus (see article by Given)