

The RAG

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Ancient Athens' answer to 'Big Ben'.
See page 11

First Year of RAG Reviewed

David Kennedy

As RAG gets well into a second year of existence, it is opportune to reflect on what we set out to do and what we have achieved. Some of our hopes and ambitions have not yet been realized but we made solid, and in several key areas, impressive advances.

First, there is the *RAG Newsletter*. This is the fourth issue and we can begin to look forward to regular publication in coming years. We have been delighted by the range and interest of articles and continue to welcome contributions from Members and others.

Membership is lower than we had hoped to have reached by this stage, but 106 is a solid achievement for our first year and we can now build on that to try and reach our goal of 200 members by our second anniversary. Once again, your contribution in bringing our group to wider attention will be crucial ... and welcome.

The RAG Web page is now up and running and we have provided several links already, including to the first issue of *RAG Newsletter*. Other issues will be added from time to time. We can now proceed to offer links to other pages – both those we generate ourselves and those of interest which are already out there. Let us have your suggestions.

Activities

We had a meeting and exhibition in autumn which was well-attended. An ad hoc committee to discuss and organize activities has met several times recently and proposals are in various stages of implementation starting with a fixture on 12

November to show two videos. One will be on the exploration of a villa in Roman Britain and the second a documentary on the city of Zeugma on the Euphrates. It is free, open to anyone; there will be a small charge for refreshments. In March, two-half-day 'schools' run by myself and Dr Glenys Wootton on Spartacus will be offered through University Extension.

One prime objective of our group is to provide sponsored Roman Archaeology Travel Scholarships to enable our students to get to the Roman World and participate in fieldwork. As you know, we have already given grants from existing funds to Karen Henderson, Felix Hudson and Anne Peopjes. Karen and Felix gave us a very professional and fascinating talk on the project they joined in Romania.

We have all been able to read Anne Peopjes account of her residence in Jordan in the last *RAG Newsletter* and another "Letter" from her is in this issue She has now been in Jordan for 16 months, has an apartment in Jarash opposite the Roman ruins and seems to be planning a further year there. A fourth application (for support to join the excavation at Pompeii) is in progress.

A Generous Sponsorship

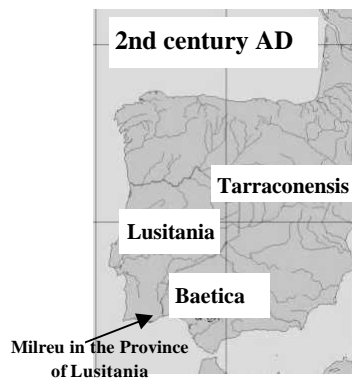
I am delighted to be able to report that Don Boyer, our Deputy Chair, has this month generously agreed with the Office of Development at UWA, to annually sponsor one of these Roman Archaeology Travel Scholarships at \$2500 pa for a five year period. That will do wonders for the future of the scholarships. Plans are in progress for obtaining sponsorship of a second scholarship (cont. page5).

Milreu, Roman Portugal: *Maire Gomes*



Maire Gomes has completed a BA at UWA with majors in English, Linguistics and Ancient History. She has a special interest in Roman Portugal, in particular the Algarve, as it is the birthplace of her husband Carlos. This article features Milreu, a site of *Ruinas Romanas*, visited on their recent trip to Portugal.

The Algarve, Portugal, was the most westerly point of ancient civilization and was known to Strabo as the ‘land of the Conii’. Throughout the ages the Algarve has been known for its mild climate, beautiful beaches, abundance of fish and richness of fruit. Today it is still a favoured region for holiday and home makers alike. Archaeological research has shown that many luxurious Roman *villae* were built in the Algarve (part of the province of Lusitania), which would suggest that there was also a preference for this type of landscape in the Roman period.



Described as ‘one of the most important of the Roman *villae* in southern Portugal’, the villa at Milreu was constructed on a spur of land between a hill containing fresh water springs and a small river, known today as the Rio Seco. Finds along the riverbank indicate that a settlement existed in the area in the late Bronze Age and early Iron Age. The term ‘*villa*’, according to Cato, includes a residential area (*pars urbana*) and an agricultural area (*pars rustica*). At Milreu the first Roman buildings relating to agriculture date to the 1st century AD and remains have been found of cellars and a wine production area. The growth and development of the residential area continued through the 2nd and 3rd centuries, building over parts of the original *pars rustica*.

Once a flourishing villa in Roman times Milreu today takes its name from the surrounding lands.

In 1877 Estácio da Veiga excavated the Milreu site and believed

he had discovered the remains of *Ossonoba*, a town mentioned in the ancient texts:

“where I unearthed the famous cathedral of Ossónoba ... I discovered an opulent bathing complex with 58 rooms, residential houses, industrial workshops, storerooms, a drainage system, and, in the shadows of the hills of Guelhim the pagan town cemetery, completely separate from the monuments, and Christian tombs which surround the majestic temple of the Corinthian Order and which are inside its two circumambient cloisters...”



Baths *frigidarium* with fish mosaics at Milreu.

Photo: Maire Gomes.

In 1952, Abel Viana proved that the town of *Ossonoba* was in fact located under the buildings and streets of the old part of the coastal town of Faro, which today is the capital city of the Algarve. More recent investigations of the Milreu site suggest that the ruins excavated by Estácio da Veiga are the building complex of a *villa* with *peristylum*, and adjoining sanctuary. The ground plan he published in the late 19th century included the remains of many buildings which can no longer be seen, for a large part of the site was subsequently covered for agricultural use. Only the foundations and some higher walls of the *peristylum*, the surrounding residential and reception rooms, the bathing complex and the sanctuary can still be seen by the visitor today.



View of the *atrium* and fountain with the imposing sanctuary in the background. Photo: Maire Gomes.

Rarely is epigraphic evidence found which can identify the owner of a villa, and the villa at Milreu is no exception. However, decoration of the villa would suggest that the owners were of high social and economic standing. The rooms at Milreu were decorated with high quality mosaics and when first uncovered in the late 19th century the floors of the *peristylum* gallery were found to be paved with mosaics in an impressive variety of geometric patterns. However, decades of exposure to the elements have seen these deteriorate and today they can only be seen in fragmented form as indicated in the picture below.



Mosaic Pavement: Photo: Maire Gomes

The villa was also adorned with imperial busts. Those of Julia Agrippina and the Emperor Hadrian can be seen at the Infante D. Henrique Archaeological Museum in Faro. Another of the Emperor Gallienus is held at the Museum Dr José Formosinho in Lagos. The discovery of these busts is consistent with the image of a magnificently decorated villa.



**Bust of the Emperor Gallienus (253-268 AD)
Photo courtesy of: António Carrilho, Curator
of the Museum Dr José Formosinho, Câmara
Municipal de Lagos.**

The decoration and display of prosperity at the Milreu villa, with its high quality mosaics, imperial busts and imposing sanctuary, appears equal to those in the Italian motherland. Excavations at Milreu were being carried out in July 2005 by Professor João Pedro Bernardes and a team from the Universidade Do



**Milreu Visitors Centre. Sanctuary reconstruction.
Photo: Maire Gomes.**

Algarve. The ongoing excavation and study of these ruins will increase our understanding of *villae* life and economy in Roman Lusitania.

For further reading see: Roteiros Da Arqueologia Portuguesa, *Milreu Ruins*

Letter from the Chair of Classics and Ancient History Dr Neil O'Sullivan

Enquiry into the past has always been a communal activity, and in no field is this truer than in archaeology. The solitary archaeologist has no more real an existence than the solitary traveller in a TV documentary, whose carefully hidden support and film crews make the whole thing possible. These crews are not only essential, but in a very real sense they are part of the adventure, sharing the difficulties and the rewards of the endeavour. Or, to rephrase this as the ancients would have, the whole team, and not just the final runner, wins a torch race.

Our colleague David Kennedy has carried the torch of knowledge far, but he has always been willing to pass it on to others. His enthusiasm and talent have built up virtually from scratch in Perth a community of students and others passionate about Roman archaeology, whom the Roman Archaeology Group now joins together in a single body.

As Chair of Classics and Ancient History, I would encourage all those with an interest in the mighty civilisation of Rome to be part of the RAG team, helping to uncover the past in whatever direct or indirect way they can, and connecting with the eloquent physical remains of that great culture.

Neil O'Sullivan
Chair
Classics & Ancient History
UWA

The Romans in Iraq - *David Kennedy*



Professor David Kennedy:
Classics and Ancient History UWA

Maps of the Roman Empire “at its greatest extent” commonly show it in the last years of the Emperor Trajan (AD 98-117) and include his short-lived conquests which took his armies as far as the (Persian) Gulf. New provinces were created called Mesopotamia and Assyria which between them encompassed most of what is now Iraq. However, Trajan’s successor, Hadrian, swiftly abandoned these untenable conquests and it was not until about 80 years later that the conquests of the Emperor Septimius Severus (AD 193-211) created an enduring province of Mesopotamia and took Roman troops to the R. Tigris. Almost a century later again, Roman armies annexed a swathe of territory beyond the Tigris and took the empire to what was genuinely its greatest, and enduring, extent. Roman armies were to remain this time for almost three generations in what is now Iraqi Kurdistan.

Of course, the story is more complicated than that bare outline. Roman armies campaigned across parts of Iraq from the end of the Republic. Pompey the Great’s general, Gabinius penetrated into northwest Iran in 64 BC then returned to Syria through Assyria and Mesopotamia. Trajan’s armies in 114-117 were the first major Roman expeditions of conquest into Iraq and as far as Babylonia. But they were not the last. Others followed in the time of Marcus Aurelius (161-180), Septimius Severus, Caracalla (211-218), and with increasing frequency throughout the 3rd century and at many intervals during the subsequent three centuries of Roman rule in the Near East.

Despite the conquests and new territories, Roman gains were modest for so much effort over so long a period. Here, she confronted the only other great power anywhere on her frontiers – the Parthian Empire and its successor in the 3rd century, the Sassanian or Neo-Persian Empire. Both stretched from Iraq to Afghanistan and, along with China far to the east and Rome itself, represented the three great contemporary empires – the “super-powers” - of the ancient Old World.

Roman “success” was often short-lived. As one historian of the period put it, the colourful pageantry of Roman armies advancing down the Euphrates and Tigris in spring and over-

throwing the unprepared Parthian forces, was often succeeded in late summer by disastrous retreats from the baking heat of Babylonia and Mesopotamia as the Parthians recovered. The Emperor Gordian III (AD 244-9) died while on campaign in central Iraq, Valerian (253-60) was captured by the Sassanians and died in captivity; and Julian (360-3) also died on campaign in northern Iraq. Sassanian rock-cut relief sculptures often depict humbled Roman emperors and generals on their knees before the mounted Great King (see an example below). Some are certainly no more than propaganda – the ancient equivalent of bombastic claims to have destroyed the Romans in “the Mother of Battles”.



Shapur I
mounted and
the Roman
Emperor Vale-
rian captured
(3rd cent.AD)
Naqsh-e
Rustam

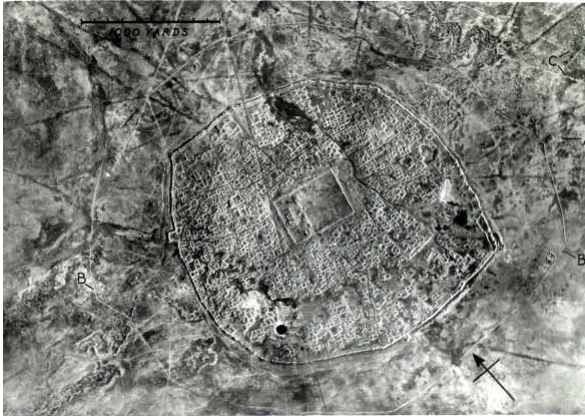
This relief is approximately h. 10m w. 12m

Most of the trace of Rome in Iraq is in the north (see map on opposite page) and often associated with names all too frequently in the contemporary news. Most notable is the outline of the great Roman legionary fortress at Balad Sinjar in Kurdistan, sprawling over 17 ha/ 42 acres. Septimius Severus made it the base of his newly created *Legio I Parthica*. A recently found tombstone from western Turkey records the deceased as having been a soldier in this legion “which is at Singara in Mesopotamia by the River Tigris”. Five kilometres to the southwest a Roman milestone of Severus Alexander (AD 222-235) reveals a new highway across northern Mesopotamia. And to the east, on the Tigris itself below Mosul, another inscription, now lost, describes the place at *Occuli Legionum* – the Eyes of the Legions. Presumably a watch post.



Sir Aurel Stein’s aerial view of Singara in 1938

Two places are particularly important archaeologically. First there is the great caravan city of Hatra. It was besieged unsuccessfully by several Roman armies before finally, seemingly, opening its gates to Roman forces whose Latin inscriptions were found there 1800 years later. The aerial photograph here shows not only the outline of the city walls but even the circuit of the siege works out beyond that. They might belong to a Sassanian siege but are more likely Roman.



1920's Vertical RAF aerial view of Hatra

Further north is the very unusual, indeed, almost unique Roman fort at Ain Sinu. It is one of the few Roman sites in Iraq ever excavated. The plan produced by the British archaeologist David Oates shows a large fort of 10.6 ha/ 26 acres, much larger than the normal auxiliary fort of just a quarter that area. More striking, however, is that it contains nothing but barracks. Or rather, what seems to be twelve rectangular courtyards each flanked by a row of small rooms (for men?) and another of large ones (stables?). One explanation is that the fort was constructed to house two newly formed regiments of local cavalry which were being trained and did not yet need their own HQ building, commanders house and the other traditional internal buildings of Roman forts.



Plan of the fort at Ain Sinu (1938)

Rome certainly recruited troops in what is now Iraq. We hear of regiments of Parthians as early as the Emperor Augustus. Later there are regiments of archers and heavy cavalry from

Mesopotamia. Most interesting of all, however, and providing a link all the way back across the entire empire to the R. Tyne at the eastern end of Hadrian's Wall is the fort at South Shields. According to a Late Roman document, the *Notitia Dignitatum*, the garrison consisted of a unit of "Tigris Bargemen". An appropriate unit given the role of South Shields as a great supply base on the Wall. But the document also tells us the name of South Shields in Roman times – *Arbeia*. Unlike almost every other name known in Roman Britain which is either Latin or a romanized version of a Celtic name, this one is unplaceable. Until, that is, you realize that "(Beth) Arbaya" is the name of northern Mesopotamia, the "Land of the Arabs". Appropriately, South Shields is today the home of the oldest Arab community in Britain, the Geordie Arabs whose ancestors arrived in the 19th century as sailors on British ships.

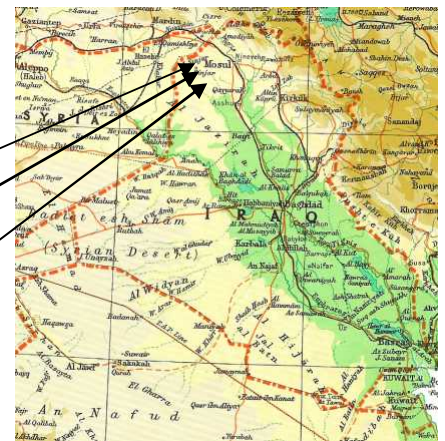
Reading: David Kennedy and Derrick Riley, *Rome's Desert Frontier from the Air*, London/ Austin, Tx, 1990.

Approximate locations on a map of Iraq of the ancient centres

Ain Sinu

Singara

and Hatra.



Chairman's Review (Cont.)

Roman Archaeology at UWA

The *Roman Archaeology* unit at UWA this past semester had some 40 enrolments. Two Honours students are researching Honours dissertations in Roman Archaeology ("Water Theatre in the Roman Near East"; "Religion at Roman Bath").

I have six Masters and PhD students in progress on topics ranging from aspects of Roman Britain to Roman Arabia and further Honours and research students are preparing to begin work on aspects of Roman Archaeology.

It is only 15-16 months since a few of us met to discuss the idea of this group. A great deal has been achieved in our first year and we can look forward to a further good year.

What we need, however, is Member participation. Joining the group revealed your interest; now we need your ideas, suggestions, participation ... and enthusiasm. Come and join us at our next monthly committee meeting ... and join in.

Why Archaeology? - Kevin O'Toole



Kevin O'Toole is a barrister and solicitor with an interest in archaeology, in particular, the archaeology of Athens.

Some while ago I was conversing with an eminent Professor of Roman Archaeology in the bar at the University of Bath when I found myself asking (I am not sure whether from mischief or curiosity, perhaps both) a fairly provocative question for which I therefore expected an immediate response. "Would we really know anything", I asked, "even if we knew the history of every atom of every Roman Period brick and of every ancient Roman bricklayer and that of all their fellow travelers?" I received a response with the immediacy I expected but there was a tone of irritation: "Yes and so what?!"

My eminent interlocutor had clearly asked himself something of the same question many times and yet his enthusiasm for his subject had not been depleted by any sense he had of its being futile.

The exchange did however put me in mind of a joke that attempts to address a perceived weakness specifically of archaeology. The joke runs something like this. An archaeologist is vigorously digging the ground in the presence of an obviously disdainful historian. In a state of chagrin the archaeologist suddenly lifts his spade into the air and spits out, "at least this spade does not lie". The historian smugly replies "that's because the spade cannot speak."

For all my irreverence above I wish to put up a case here that archaeology is not futile for any reason that its instruments are mute, and that archaeology is not futile at all. I shall refer for the purpose to three lessons of archaeology, all given in Athens (as they are given in so many other places that have been turned over by archaeology). I am limited to three by the space available, the full argument is set out in the vast legacy we now have in books and journals reporting the results of archaeological research over the past two centuries or so.

There is an ancient cemetery in the Kerameikos archeological district, a few hundred metres or so to the north-west of the site of the ancient Athenian Agora. For the better part of two thousand years its funeral monuments had lain beneath an overburden of up to some eight metres or more in depth until archaeological excavations commenced in the late 19th century.

The spades of the archaeologists began to release what had been muted voices, voices that had spoken as long ago as the 4th and 5th centuries BCE. Quite when humanity sparked into existence we may never know but here were voices that tell us that human-

ity and its imperatives had been invented long before the doings and doctrines of the intellectual and religious movements of the Common Era. Pictured below is the grave stele of Ampharete (circa late 5th century BCE).

The stele was unearthed at Kerameikos and is now exhibited in the Kerameikos Museum. It bears the following inscription:

"I hold here my daughter's beloved child the one whom I held on my lap while, alive, we looked at the sun's light, and whom I hold still though we are both deceased."

(Adapted from the translation of C.W. Clairmont)



A picture is of course worth a thousand words, and that is true in the exquisitely delicate lines of the relief sculptures borne by the stelai in the Kerameikos but combined there as they are with the words of their inscriptions, the compositions bespeak the presence in classical Athens of no less a sense of humanity than that to which we presume to lay claim.

Consider in that regard also the Roman Period pull-along toy that was unearthed in the Agora excavations.



This toy (circa 2nd-3rd century CE) is exhibited in the Agora Museum in the Stoa of Attalos in Athens.

What mother and father two thousand years ago enjoyed the anticipation of seeing the delight of their child on being presented with the little horse with wheels? The toy tells a story that is ageless.

So what? Well archaeology has given us a lesson. It is that the so called pagans nurtured their souls no less than we do. On the whole relative to circumstance human beings have been the same everywhere and always.

It is much to be regretted that the Kerameikos is not visited by tourists nearly as much as the other sites in Athens.

I turn to a case where we can see archaeology as a vital link in a dialogue with ancient literary sources and epigraphy.

In the north-west corner of the Classical Agora in Athens the remains of a small building, the Royal Stoa, were unearthed in 1970 (after a 40 year search). The directions for finding the remains were given by the Roman Period travel writer Pausanias in his *Travels in Greece* composed in the mid-2nd

News from Jordan—*Anne Poepjes*

The northern hemisphere summer sees a flurry of archaeological activity in Jordan, with international teams taking advantage of the university break. I was fortunate to be involved in two survey seasons this year, which not only gave me invaluable skills and experience, but also meant that I was able to escape the sweltering heat of Jarash.



During August, I was a member of the South Jordan Iron Age Project, directed by Dr Charlotte Whiting and funded by the Council for British Archaeology in the Levant (CBRL). Our team was housed close to the village of Showback, with stunning views of the crusader period castle, and only a short distance from Wadi Mousa, the town at ancient Petra. This region, although in the south of modern Jordan, is much cooler in the summer months, due to the high elevation.



Trench 'B1', Khirbat ad-Dabba

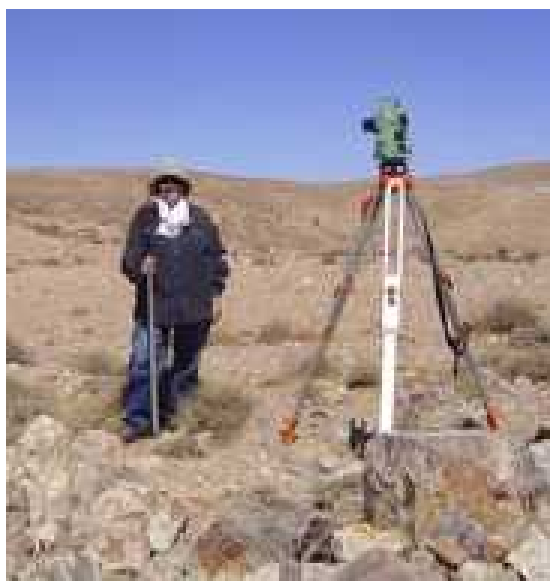
The aims of the 2005 season were:

- to continue identifying new sites from aerial photographs;

- to excavate at Khirbat ad-Dabba, an Iron Age hill fort south of Showback;

- to complete a topographical survey of Khirbat ad-Dabba and structural surveys of other Iron Age sites as directed by Dr Whiting.

I was the 'chainman' (or should that be 'chainperson'?) for the survey team, which involved endless walking up hill and down dale. My tasks also included taking the GPS readings, and navigating to sites using a combination of GPS and local maps (OK, as those who know me are well aware, slight assistance was required with the map reading at times, if we were to arrive at our designated site...).



Anne Poepjes: Survey Assistant extraordinaire.

Although getting up at 5.00 a.m. (for a whole month) is not usually my idea of a good time, with physically demanding, long hours each day, the benefits far outweighed the discomfort. Aside from the daily excitement from the excavation team (with finds including two small animal figurines and huge storage jars from the Byzantine and Iron Age periods), I felt extremely privileged to be in such a surreal place; each day, the goat and sheep herders would pass by, with bells tinkling and the sound of the pipes drifting on the wind, the scenery was stunning and the local inhabitants charming and hospitable, as always in Jordan "You are welcome". And where else in the world do people come to work each day by donkey?



The workmen on their trusty steeds

September brought a whole new set of experiences. Back in Jarash, with the weather thankfully much cooler, I was a member of the Jarash Hinterland Survey (JHS05). The brief was to survey the surrounds of the Roman period city walls, to discover what sites still remain amongst the houses and olive groves. The team quickly decided that only the region west of the city, which was most under threat of new building activity, could be completed in the two weeks available. I am particularly interested in this region, as I lived there until recently.

Once again entrusted with the GPS, my tasks involved recording the co-ordinates of each site and entering them into a spreadsheet. I collected artefacts when required and washed the pottery. Two sites were identified as high density pottery scatters; these were divided into 'transects' and the whole team walked side by side, collecting any rim, handle or base shards; these are the 'diagnostic' pieces, used to date the pottery. This procedure is the same as that used by the police to find evidence at a crime scene.



Recording the GPS co-ordinates

Although much of this region of the city is already developed, and therefore unavailable to the survey team, more than 200 sites were identified. Of course, not all are large or deemed as 'significant'. More than 60 rock cut graves were identified along with 30+ Roman(?) period quarries; the rocky hillsides were ideal for providing the limestone used for building within the city, and the evidence of ancient quarrying abounds. However, it is important to record as many of the sites as possible before they disappear. A number of inscribed stones were found, many of which exhibited Christian symbols such as crosses; these were relocated to the Jarash Archaeological Museum.



JHS05 Team

However, some of the sites identified are worthy of excavation or further study; one of the 'hypogeum' tombs still contained human remains and artefacts, two caves possibly have Paleolithic remains within, and an extensive Roman period mausoleum was identified at the edge of the survey area. It is hoped that further funding will ensure that the remainder of the area around the ancient city walls be surveyed in the following years.

I would like to thank Professor David Kennedy and the University of Western Australia for giving me the opportunity to undertake research in Jordan, and the Roman Archaeology Group for the travel grant.

SOME OF THE SITES IDENTIFIED BY JHS05

**Inscribed stones
(Roman period altar)**



Rock cut graves



**Ottoman period
Aqueduct to grain
mill**

Roman Archaeology in Jordan, 2005—*David Kennedy*

As in most previous years, I was running two fieldwork projects with an overlap and trying to squeeze the most out of inadequate resources.

Aerial Archaeology in Jordan is in its 9th season now and still the only “active” programme of aerial archaeology anywhere in the entire Middle East from Morocco to India. A detailed account will appear in a future edition of the RAG Newsletter

The **Jarash Hinterland Survey** began this year. I had funding from UWA and from a Cotton Research Fellowship in the UK but a third grant application was unsuccessful. The project was so important, however, that we decided to go ahead anyway.



Jarash from the southwest. The survey of the cemeteries, quarries and industrial area took place amongst the houses at the bottom and left.

“We” refers to my Co-Director, Fiona Baker, and me. Fiona Baker is a professional field archaeologist who has 20 years experience in fieldwork - including Turkey, Jordan and Egypt - and runs *Firat Archaeological Services* in Scotland. Fiona in turn recruited two old colleagues and friends, Paul Sharman (coming from the Orkney Islands!) and David Connolly (more prosaically, from near Edinburgh). Anne Poepjes (from UWA – see p. 8) joined from her base in Jarash and Eman Oweis, Director of the Jarash Museum was our local Representative. David’s wife Maggie and Anne’s daughter Naomi rounded off the team as willing pottery washers! (See the team photo on page 9).

Quite simply, Gerasa - officially Antioch-on-the Chrysoroas - is a wonderful place: one of the best-preserved examples of a Roman city anywhere. Eighty-five hectares within an almost complete wall circuit 3.45 km long; three theatres, two baths, a hippodrome, a colonnaded streets totalling almost 2000 m in length, two of the largest pagan temples anywhere in the East, 15 churches, several hundred inscriptions in at least three languages, two monumental gates, a triumphal arch The arch is dedicated to the Emperor Hadrian who wintered there in AD 129/30 and, for those months, the place was effectively the centre of the Roman world. We can only guess at the impact on a little city of maybe 8-10,000 people of the arrival of the imperial court with thousands of soldiers, household staff, civil servants and those aristocrats who accompanied the emperor with *their* households. (And lets not forget the thousands of animals needed to carry, haul ... and be eaten). Apart from anything else it must have imposed an unbearable strain on the sanitary arrangements! And it was quite a contrast for those who had been with the emperor c. 8 years earlier in the far northwest, arranging to have his famous wall built in Britain.

As a city the site seems to have been abandoned since about the time of the Crusades and it was only in the late 19th century that the Ottoman authorities re-settled some refugee Circassian [= European Muslim] families on the eastern half of the ruins. Modern Jarash developed slowly and entirely inside this eastern half of the site, split off from the major monuments in the western half by the perennial stream of the R. Jarash – the Chrysoroas, “Golden River” of the founders - that bisects the city. But that has changed in recent years. First a hospital was built on top of Tall Jarash, the great mound of the Bronze and Iron Age predecessor to Graeco-Roman Gerasa. Then the new town spread and overflowed the city walls on the east side. Then rebuilding in the new town inevitably struck buried ruins in that half of the ancient city. Much more critical, however, was the development on the entire western circuit from south round to north and outside the walls.

The Department of Antiquities had long since protected the stunning ruins in this western half but the new development was of new houses going up wholesale *outside* the ancient walls. We already knew there were ruins beyond the walls – cemeteries were located there and two large underground tombs had been found and recorded. But now the pace of development has increased dramatically. Jordan has only some 6 million people today but that is a virtual doubling in a generation. And the two Gulf Wars have brought an estimated 1.5 million Iraqi refugees – a stunning 25% increase in the population of this small country. The result at Jarash alone is the steep increase in construction, much of it unregulated, sometimes almost clandestine.

On previous exploration beyond the city walls of Jarash, I had noted traces of tombs – mainly the huge sarcophagi (stone coffins) the well-to-do could afford. It was clear that the cemeteries were being disturbed and even destroyed and that recording and, where possible, preservation, was urgently needed. Hence the decision to go ahead with the survey even if only for two weeks because anything done would be of value and our report might stimulate financial support for a bigger effort in 2006.

We were using the latest tools and techniques: a hand-held Geographical Positioning System (GPS) and a Geographical Information System (GIS) with rectified vertical air photos as its base and the field team was highly professional and experienced. The results can be tabulated: over 200 “sites”, almost 90 of which were tombs; dozens of others were minor quarry sites; an arched aqueduct to an Ottoman watermill (see photo page 9) and another bringing water into the city, plus five cisterns; three Greek inscriptions and two stones with Christian crosses inscribed. Notable, however, were four sites that sum up the threat and the potential.

Site 002 was encountered the first day. It is not really a site at all but what was left after building work had destroyed a large tomb. As the photo shows, the evidence consists of two beautiful huge sarcophagi perched on top of a mound of rocks.: The work of that *bête noire* of archaeology – the bulldozer. Later we found another bulldozer heap (Site 130) – this time no less than eight sarcophagi!

A few hundred metres to the west, local people showed us a recently discovered tomb, buried deep beneath their fields (Site 021). The human remains were largely gone and any sarcophagi long since disappeared as well. But the great stone door, carved with a relief decoration, was still in place – a novelty in such tombs. The locals said they had opened the tomb with explo-

sives - - along with the bulldozer, these are the tools of choice of the modern grave-robber.



Sarcophagi bulldozed onto a pile of rocks from a destroyed tomb.

The most exciting site for all of us was the one we called the Tomb of the Councillor (Site 043). Plainly it was a wealthy tomb - several sarcophagi were still scattered around, some of them still in place in the grave slots which were on two, if not three, storeys; several elaborate architectural pieces hinted at an ornate structure probably an above-ground mausoleum rather than an underground chamber; smashed pottery and glass hinted at recently discovered grave offerings some locals had found and broken. Nearby lay two large stone doors of the type found in tombs – apparently uncovered by a bulldozer while clearing land for a house and road nearby. It then left a cut right alongside the Tomb of the Councillor.

Finally, amongst all the graves and quarries the team collected hundreds of pieces of kiln slag, kiln furniture and kiln pieces and pottery wasters (the damaged pots discarded by potters) (Site 094). Plainly the area just outside the west gate had been the scene of some industrial activity in the Late Roman/ early Islamic period. All too often, Classical Archaeologists have bypassed this seemingly unexciting economic evidence while reaching for the glossy remains of the temples and colonnades. This probable kiln area would be important to excavate.

Even before we left, the team was keen to know about “the next season”. Plainly there is a desperate need to extend the survey. The original plan had been to record the remains over an area 2 x 2 km around all sides of the ancient city. We managed only a strip c. 2 km by 400 m, and half of that was already under roads or houses! The Jordanian authorities are willing but lack the resources, so such work is largely dependent on what foreign archaeologists can do. Compared to the hundreds of thousands, in some cases millions of pounds spent on individual sites in the UK (and elsewhere in the EU), the few thousands of dollars the season in Jordan cost was highly cost-effective. And most of the cost went on air fares for the team most of whom were there during annual vacations without any wages.

The survey needs to continue in 2006 and on a much bigger scale. It needs complemented, too, by an excavation at the Tomb of the Councillor and its protection and conservation. Sadly, Australia is a relatively poor place for supporting such projects and it is at least as likely *no* funding will be available and we will just watch helplessly in the next 5 years as known sites are whittled away and the hundreds of unrecorded ones fall victim to the bulldozer.

The ‘Tower of the Winds’: Ancient Athens’ Answer To ‘Big Ben’

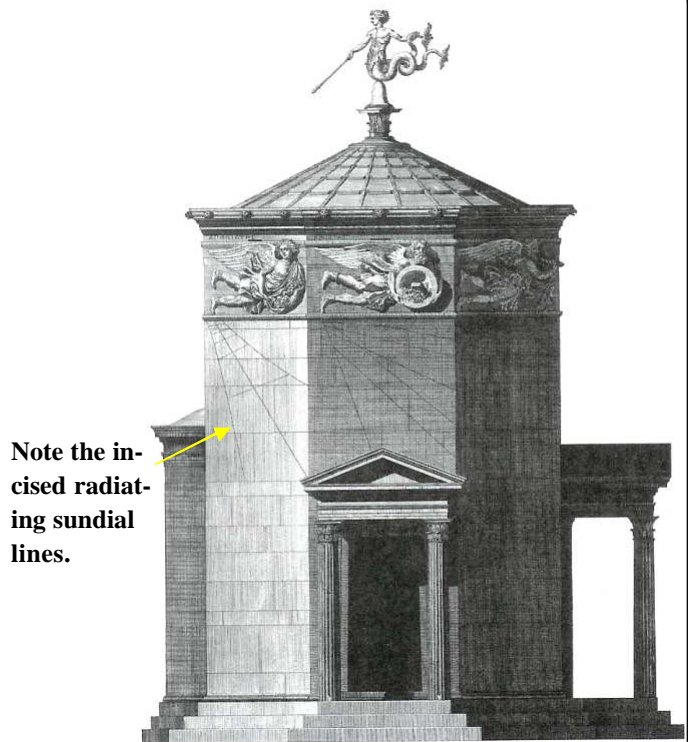
Kevin O’Toole

In the mid-second century BCE (or according to some opinion the mid-first century BCE) Andronicos of Kyrros an astronomer designed a horologion (a clock) in the form of an octagonal tower of pentelic marble. The remains known as the ‘Tower of the Winds’ can be seen today on the site of the Roman Agora in Athens.



The Tower of the Winds some 14 m high in the Roman Agora, Athens. The Acropolis with northern side of Erechtheion in background.

For telling the time there is a system of sundials on each exterior face, and there was a hydraulic clock inside. To ascertain the winds there was a bronze weather vane on the top. Like you can with ‘Big Ben’, the ancient Athenian could tell the time from each face of the clock. Of course the sun had to be shining but look on the bright side, the Athenians had eight angles to use, with ‘Big Ben’ you have only four!



Note the incised radiating sundial lines.

**The Tower of the Winds:
A sketch by J. Stuart and N. Revett, 1765**

This issue of the RAG was proudly sponsored by —

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The expertise and time to set up an online catalogue is beyond the available resources. If anyone has ideas or knowledge of setting up such a catalogue online Professor Kennedy would be glad to hear from them.

Events

Saturday 11 March 2006

**Spartacus: Ancient Uprising and
Twentieth Century Politics - Part I**

1.30-5.30 pm (with a tea break)

Saturday 18 March 2006

**Spartacus: Ancient Uprising and
Twentieth Century Politics - Part II**

2-5 pm (with a tea break)

Presented by Prof. David Kennedy and
Dr Glenys Wootton.

Bookings can be made through UWA
University Extension as part of their
Winter Programme of courses. Please
check their web site and mailed flyers for
the final details of place, timing and cost.

UWA Units in Roman Archaeology

Readers may not be fully aware that all
UWA units are open to the public to at-
tend (for a fee) without having to take
exams or even attend the tutorials. First
Year units are normally 26 lectures (two
a week) and Second and Third Year units
are normally 20 lectures. Units generally
fit a single semester.

In 2006 the units that are relevant to
those interested in the Roman world are:

Semester 1

*Glory and Grandeur: The Achievements,
Significance and Legacy of the Greek
and Roman World* (First Year)

Roman Britain (Second/ Third Year)

Semester 2

Julians and Julio-Claudians (First Year)

Foundation of the Roman Empire
(Second/ Third Year)

Full details of units are online at [http://
www.classics.uwa.edu.au/](http://www.classics.uwa.edu.au/). Enrolments
are managed by University Extension at
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dresses below.

The RAG Inc

Chairman

Professor David Kennedy
M205 Classics and Ancient History
University of Western Australia
Stirling Highway
CRAWLEY WA 6009

Tel: 08 64882150 Fax: 08 64881182
E-mail: dkennedy@cyllene.uwa.au

Deputy Chairman Rodney Greaves

E-mail:
Rodney.Greaves@justice.wa.gov.au

Secretary

Michael Manley
M209 Reid Library UWA

Tel: (08) 64882330
E-mail: mmanley@library.uwa.edu.au

Treasurer

Maire Gomes
M205 Classics and Ancient
History UWA

E-mail: gomescm@bigpond.com

The RAG Newsletter

Correspondence to the Editor:

Kevin J. O'Toole
O'Toole & Oprandi
Level 7, St George's Court
16 St George's Terrace
PERTH WA 6000

Tel: (08) 92214748 Fax: (08) 92213595
E-mail: kjotoole@otooleoprandi.com.au

Aerial Archaeology in Jordan

This project of active aerial archae-
ology—the only one in Middle East—
has been running since 1997 with fur-
ther seasons planned for 2005 onwards.

Several thousand colour slide transpar-
encies have been taken and Professor
Kennedy is looking for a mechanism to
make the material better known and
more accessible. The obvious solution is
to scan all the slides and put thumb
sized versions on a catalogue online.
The thumb should be linked to a larger
version but one that is informative with-
out allowing direct use. The image
would also have a Copyright warning.
After several years, the project now has
revised funding arrangement which it is
hoped will develop to make the project
largely self-sustaining.

At the moment part of the costs are
borne by the Royal Jordanian Air Force
which provides helicopter flights at one
third (US\$500) of the commercial rate
of (US\$1500) per hour; part comes from
a regular private donation of £2000
(c.AUD\$5000); part from grants from
up to five institutions; and part from
income from the occasional provision of
photos to archaeology projects of their
site/region. It is the latter which it is
hoped to develop by advertising the
archive and making it easier for poten-
tial users to find and purchase what they
want.