With the apparent return of the historical epic movie – Braveheart, Gladiator, The Passion of Christ, Troy, King Arthur and several films of Alexander and Boudicca (Boadicea for those over 40), attention is again focused on the authenticity of the genre. Was it really like that? Is the costume and architecture true to life? And, most commonly asked by those who enjoyed Gladiator, was the gripping battle scene at the outset, true to Roman warfare of that period (mid-second century AD). Troy is currently being laughed off stage for its wildly inaccurate story and mixing and confusion of buildings, equipment and artefacts and, as many readers will know, Kathleen Coleman of Harvard University was deeply upset by how little attention was paid to her as “consultant” for Gladiator.

Below is a contribution by Dr Mike Bishop. Readers who took part in either of the Tours of Roman Britain will remember him as our expert guide at Housesteads and Vindolanda Roman forts and will know he is an expert on Roman military equipment (see, in particular, Bishop, M and Coulston, J, (1993) Roman Military Equipment, London).

How Accurate Was the Battle Scene in Gladiator?

Mike Bishop

Movies are all about entertainment and accuracy is often the last concern of a director. Nevertheless, the power of film to convey an experience few of us can comprehend – ancient warfare – means it can be an important aspect in our appreciation of the past. What was it like to be a Roman legionary, surrounded by your comrades, facing a horde of screaming barbarians?

The opening battle scene in Gladiator begins in a clearing in woodland in darkest Germania (although it was actually filmed in the stockbroker belt in Surrey), with the Romans drawn up in front of their camp. The general moves amongst his troops, acknowledging them, a ploy often found in the sources (many generals making a point of knowing the names of their men). An emissary is sent back – headless – and the barbarians pour out of the woods after taunting the Romans (again, not implausible). However, Maximus then joins his cavalry in the woods in order to surprise the Germans’ rear. No Roman general would leave the main body of his army or place cavalry in woodland, let alone charge them through it, which is what happens next (trees disorganize cavalry). Cavalry could indeed attack the rear of an enemy, but by outflanking them, and always in the open; their main function was to hack down a retreating enemy from the rear after the enemy had broken, which was when most casualties occurred in ancient warfare.

The archers dip their arrows in a flaming trench (pure Hollywood: fire arrows were only of use in siege situations). We see two types of artillery: ballistae shooting javelins (accurate) and single-armed...
This newsletter is the first issue published by the recently formed Roman Archaeology Group. It has been evident for some years that academic courses at UWA on the subject of Roman Britain, Roman Archaeology, Roman Art and Architecture and various honours special courses are well attended and popular. Likewise courses offered for the wider community through University Extension attract large attendances (almost 45 for the recent course on “Petra, the Nabataens and the Roman Empire”) as do also special lectures by visiting scholars.

The success of two recent three-week tours of Roman Britain has revealed a wider group eager to participate in promoting the subject and helping, in the face of limited official resources, in sustaining an intelligent and informed connection with a major component of our shared cultural roots. We have taken the initiative therefore to form the Roman Archaeology Group and to report on Roman Archaeology to a wider audience. An immediate objective is to draw in a still wider circle of people of all ages, backgrounds and interests to join us in enjoying the subject and, if possible, supporting our broader aims which include the following:

(a) the provision of financial support to tertiary students in Western Australia to further their studies in Roman Archaeology;

(b) the creation of fieldwork opportunities in Roman Archaeology for students and members resident in Western Australia;

(c) fostering the arrangement of joint ventures with other interest groups to participate in investigations of Roman archaeological sites; and,

(d) the endowment of an additional teaching and research position in Roman Archaeology in a tertiary institution in Western Australia

(e) arranging exhibitions, publications, lectures and courses for the community.

The legionaries advance steadily, fend off a volley of arrows by locking shields, and are charged by the barbarians, whilst the cavalry in turn charge into their rear from the woods. The Roman line rapidly disintegrates into a free-for-all in a way that is extremely unlikely (Roman supremacy on the field depended on formations holding their integrity). Meanwhile we see Maximus fighting for his life using just a sword, despite having killed more than one shield-bearing barbarian. A shieldless Roman soldier’s first reaction would always have been to grab a shield because he was taught to fight with sword and shield.

The Germans (Marcomanni, presumably, since we are in Marcus Aurelius’ Marcomannic Wars) look dishevelled and disorganised and, although there is the odd incongruous carnyx amongst them (it was a Celtic, not a Germanic horn), there is not much to counter the very little we know about them. The Romans are a different matter. Curiously, their equipment is not closely based on excavated examples but is half-imagined generic Roman armour; in fact, the helmets look closer to the sort of things worn in the English Civil War. The archers wear long nightdresses and pointed helmets, a clear lift from Trajan’s Column not supported by tombstone depictions of such troops. The Roman cavalry wear segmental body armour, which is unlikely (not least because it would shake itself to pieces in the average charge!). However, the army does look grubby, worn, and something like we might imagine a Roman field army would have appeared when on campaign.

There are two standards in re-creation of the past. Accuracy in detail, but too much polish (re-enacters), and atmospheric inaccuracy (Hollywood), and it seems that, with the odd exception like Gettysburg (which successfully used American Civil War re-enactors as extras), the twain are destined never to meet. Both serve to tweak our imaginations, but neither, one suspects, give a clear picture of what ancient warfare was really like. ‘Strength and honour’ perhaps, but not too much authenticity!
Roman Britain Tour 2003 — Natalie Cullity

We were hosted at luncheons, welcomed onto excavation sites, met at museums, given an extraordinary depth of information and guided through hundreds of years of history by some of Britain’s foremost authorities on Roman Archaeology.

Among many highlights, several stand out: walking alongside a ‘Roman Centurion’ (see photograph front page) at the pre-Roman conquest Iron Age site of Hod Hill in Dorset; satisfying a lifetime’s ambition to visit the massive frontier defence of Hadrian’s Wall; standing on the parade ground of Hardknott Fort in Cumbria; enjoying a guided tour of Fishbourne Palace by the CEO of the Sussex Archaeological Society, and visiting collections in London’s British Museum, the Hunterian Museum in Glasgow and the National Museum in Edinburgh.

‘Segedunum’ or ‘strong fort’, at WallSEND, the east end of Hadrian’s Wall on the banks of the River Tyne and a world heritage site, was spectacular. For three hundred years Segedunum was home to about six hundred cavalry and infantry soldiers, and nowadays is the site of a magnificent museum complete with a Roman fort and baths.

While the plans of most Roman forts are fairly standard, Segedunum is the only place in the Roman Empire where you can see the whole fort laid out. This is possible because much of the fort has been explored by archaeologists and the position of every building is known. The site was covered by housing in the 19th century, and not discovered until 1929. A 35 metre high tower has been built to provide a view over the fort site and surrounding area, and computer screens show the changing view from the tower over the past two thousand years – incredible!

I have indeed followed in the footsteps of the Romans – and what a privilege it was.

Every field of intellectual endeavour has its controversies. One of the controversies in the history of Roman Britain is where the invasion of AD 43 landed. There are two contenders: Sussex (near Chichester) and Kent (near Richborough). Advocates for each contender have the usual near religious fervour in the statement of their case. Mr Nigel Nicolson and his disciples have set their view in stone indicated in this photograph.

The Nicolson camp actually has good textual support in the writing of Dio Cassius (LX, 19-22) who, inter alia, makes geographical observations that arguably correspond with modern topography in Kent, in particular the River Medway. In truth, there was probably a landing at each site, with a smaller landing at Chichester. (Ed.)

Natalie Cullity: Natalie is a speech and drama teacher by profession and she recently fulfilled a life-long ambition by completing a BA, taking majors in Ancient History, Italian, and Anthropology. In this article she recalls some of her experiences during the Roman Britain Tour of 2003, led by Professor Kennedy, Emmie Lister and Nigel Wright of Classics and Ancient History at UWA.
Andrew Card: For his Doctorate Andrew is researching the role of the Roman army in Arabia, with special emphasis on the interactions between the nomadic population and the Roman army.

Emmie Lister: For her Doctorate Emmie is looking at the archaeological evidence for food and diet in Roman Britain. She hopes to be able to assess temporal and spatial patterns in the consumption of various types of food, and hopefully apply the results to the contentious topic of ‘romanization’.

Pam Lynch: Pam is a Doctoral student investigating the people of Roman Britain through mortuary archaeology. Pam is looking at age and gender distribution, health, occupations and lifestyle through skeletal evidence, graves goods, and grave and cemetery organization.

Kate Wolrige: Kate’s Doctoral work is in the area of Roman Arabia. She is researching the Graeco-Roman city of Gerasa (modern Jarash in northern Jordan).

Mike Knowles: Mike’s is researching settlement history in the Roman Hauran (northern Jordan and southern Syria) for his Doctorate.

Catherine Arends: Catherine has recently and successfully completed her Doctoral thesis on Roman Egypt: “The Roman Military in Egypt: Landscape, Community and Culture”.

Anne Poepjes: Anne is undertaking her Masters in the area of Heritage Management. Unlike most of the other graduates studying archaeology, Anne neither digs up nor rebuilds anything as the main focus of her research. Rather, it is a documentation of the management practices of archaeology parks, with specific reference to Jarash, a Graeco-Roman city in Northwestern Jordan.

Nigel Wright: For his Masters Nigel is looking at the levels of interaction between Britons and Romans in the north of England. He is currently conducting ‘town and hinterland’ studies on five 'Roman' sites (Vindolanda, Carlisle, Newstead, York, and Catterick), to assess the impact (if any) of the Roman occupation.

Brooke Marshall: Brooke is currently concluding her Honours Dissertation on Roman Philadelphia, the modern day capital of Jordan, known today as Amman. Her dissertation is entitled: Philadelphia: The development of a Roman City of the Decapolis. It covers the major Roman structures and buildings which were constructed as a result of Roman control and influence in the Near East.

Sabrina Durham: Sabrina is doing her honours dissertation on the Orpheus mosaics of Roman Britain in the 4th century AD. She is looking at how these mosaics can be used as evidence for their owners’ society and culture.

Maire Gomes: Maire will be beginning her honours thesis in 2005. Her research will focus on an aspect of Roman Portugal.

The Painted Tombs at Abila — Photographs by Anne Peopjes (see article at page 9)
In May I attended the 9th International Conference on the History and Archaeology of Jordan, which was held at Petra. This was one of a series of conferences held every 3 years (the last was one in Sydney, 2001) dealing with aspects of Jordanian history and archaeology throughout the ages, with the emphasis on archaeological topics. This year’s conference had the nominal theme of “Cultural Interaction through the Ages”, but the topics presented were extremely wide ranging, covering subjects such as use-wear patterns on palaeolithic stone tools, camel petroglyphs in the Wadi Nasib and trade routes in Jordan from ancient to modern times. In practice it was hard to discern any uniting theme other than a connection with Jordan, although given the aridity of the local environment a number of papers were concerned with water management techniques by various communities. Two papers were prepared by UWA staff and students: Professor David Kennedy presented a paper titled “Ancient Roads in Central Jordan”, which dealt with Roman road systems discovered largely through aerial survey, and a paper, which I presented, prepared by Anne Poepjes, entitled “An Exhibition on a Shoestring”, dealing with a museum exhibit constructed at the museum at Jerash the previous year.

This was the first conference I had been to, so I was not sure quite what to expect. With about 200 attendees the lecture schedule was quite busy. Talks began at 9am and went through to about 7.30pm, with 2 hours for lunch between about 1-3pm. With such a schedule it was important that papers ran on time, and overall this was managed quite well. I found that previous volumes of the SHAJ proceedings contained a lot of new and valuable material but in that medium there is not the same restriction on space or time as is imposed by a conference. In effect, many of the presentations are often only a précis of what will be published in the associated volume, so it will be interesting to see the forthcoming publication for this conference.

Petra is certainly a magnificent location for a conference. It was a real bonus to be able to view the wonderful sites that are available close by. One morning a few of us wandered down through the Siq to see Petra itself, with the company of the occasional Bedouin hawker or lone donkey. The magnificent carved tombs and classical structures vied in grandeur with the natural rock formations and with the morning light bringing out the subtle colors of these imposing rock surroundings.

It was also great to catch up with friends and colleagues from some of my previous trips to Jordan, and to meet some of the luminaries in my field of study, many of whom I knew as names only. Most of them seemed quite normal; hardly the super-beings I had imagined.

The Jordanian hospitality was of a high standard: we were put up in a well appointed hotel located right next to the entrance of Petra and all our meals were provided, both at the hotel itself and at the local venues.

One night we were treated to traditional Bedouin dancing to accompany our feasting. Official trips were arranged to the Neolithic village of Beida, and of course to Petra itself.

Normally I lose a bit of weight on my trips to Jordan, but this year my wife commented on my generous figure upon my return. Just one of the many sacrifices which are necessary in the academic field, I suppose.

It is important to thank the Jordanian Ministry of Tourism and Antiquities, the Department of Antiquities and the Al-Hussein Bin Talal University for organizing this conference, under the Patronage of His Majesty, King Abdullah II. Apart from a few minor technical hitches the conference ran very smoothly, and the organizers can be proud of the final result.

Overall I found the conference a positive experience.
**MOLECULAR GENETICS IN THE STUDY OF ANCIENT PEOPLES**

**Did the Romans Leave Their Genes Behind?**

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David Gibb: David is a retired medical technologist who in his retirement completed an MA in ancient history at UWA. The following article is on the subject of his thesis.

Molecular genetics has been defined as the biology of those molecules related to genes, gene products and heredity. In other words, it is genetics as viewed at the level of molecules and, in particular, molecules that involve the structure and sequencing of the nucleic acids, which carry the genetic information. The molecule that stores genetic information is deoxyribonucleic acid (DNA). DNA contains four bases or nucleotides, that is, adenine(A), thymine (T), guanine (G) and cytosine (C). The letters, ATGC, may be likened to the alphabetic code of molecular biology. These letters make up the words (codons) (see diagram of DNA molecule opposite) which, in turn, form the sentences (sequences) and stories (genes) used to codify the various structures that form genetic complexes. Among other things, they can be used for the identification of hereditary characteristics of individuals and populations. The sequences and genes are located in the chromosomes (chapters) and all 46 of them make up the genome (the book of life).

Molecular genetics provides a means of investigating the origins of people and their relationship to each other, such as in their genetic evolution in Europe, for example, by an analysis of their mitochondrial DNA. The mitochondrion is an organelle found in the cytoplasm of cells of higher organisms and its DNA is inherited, almost exclusively, from the mother. Each individual carries only one type, unlike nuclear DNA where inheritance is from mother and father. Phylogenetic trees relating to mitochondrial DNA may then be interpreted as genealogies reflecting the maternal history of the population. This uniparental inheritance of mitochondrial DNA with no apparent sign of intermolecular recombination, a faster rate of evolution than nuclear DNA and its presence in high copy number in the cell makes it ideal for phylogenetic, population and identification studies.

As an example of such studies on population origins, the molecular genetics of the peoples of Europe were investigated, by Sykes and others, using DNA obtained from samples of blood and hair from maternal grandmothers in rural districts. The sample size and DNA phylogeny of an analysis of mitochondrial DNA regional variants demonstrated a spread from Africa between 100,000 to 60,000 years ago to the entire Old World. This expansion is in agreement with archaeological evidence of the earliest modern humans from about 100,000 years ago and the creative explosion of the Upper Palaeolithic type technology of some 50,000 years ago.

The results distinguished 5 major lineage groups from sequence variations of individuals from Europe and the Middle East. A refinement of the sample size and DNA phylogeny supports an interpretation of 3 separate phases of colonisation occurring in

(i) the Early Upper Palaeolithic (about 50,000 years before the present era (BP));
(ii) the Late Upper Palaeolithic (11,000 to 14,000 BP); and
(iii) the Neolithic (from 8,500 BP).

![Diagram of DNA molecule](http://www.ebi.ac.uk/2can/tutorials/structure)

**Source:** European Bioinformatics Institute.

![Sugar Phosphate Backbone](http://www.ebi.ac.uk/2can/tutorials/structure)

**Base pair**

**Thymine**

**Cytosine**

**Nitrogenous base**

A = Adenine

T = Thymine

C = Cytosine

G = Guanine

From these different periods of colonisation it is estimated that phase (i) has contributed 10 per cent to the modern gene pool, with the largest contribution of 70 per cent being provided by phase (ii), and the remaining 20 per cent by phase (iii).

The group (i) colonists spread over Europe from the Near East and with the advent of the last Ice-Age, 18,000 to 20,000 BP, retreated to refugia in SW France and Cantabria or to the Ukraine in the east to survive in a less life-threatening environment.

Support for this hypothesis is concluded from the absence of authenticated archaeological sites in northern Europe between 22,000 and 14,000 BP. As the Ice Age receded the population expanded from its refugia into areas which were now well stocked with game and sustenance. Evidence of late glacial human re-colonisation of Northern Europe is confirmed by radiocarbon dating of archaeological sites.

The flow of Mesolithic colonists throughout Europe to more bountiful environs no doubt created the genetic divergence within group (ii), and was seen as significant in shaping the modern mitochondrial gene pool.

Group (iii), the last wave of European colonisation in 8,500 BP, the Neolithic period, is attributed to the spread of agriculture from the Middle East. The mitochondrial phylogenetic analysis demonstrates clearly Middle Eastern ancestry and the two subdivisions of haplotype clusters shadow the two major farming routes into Europe. These routes, as defined archaeologically and evident genetically, followed the Mediterranean and the Atlantic coastlines, while the other route followed the Danube to the rich riverine regions of Central Europe. This hypothesis, presented by Richards, Sykes and others, indicates that, contrary to the ‘wave of advance’ model of Cavalli-Sforza and others, the ancestral European genetic changes were not determined by Neolithic farmers but by earlier Mesolithic arrivals who were responsible for the genetic diversity following the last glacial period.

Bodmer suggests that before the arrival of agriculture the population of Britain was descended from the Late Palaeolithic hunters who occupied Northwestern Europe. Following the phylogeny described by Sykes for group (ii) the arrival of these Mesolithic people could have happened in the postglacial period, some 12,000 to 10,000 years BP. These invaders or migrants with origins adapted to a cold and dark climate were, as Bodmer says, tall, red haired and blue eyed. These hunter-gatherers, at the time of arrival by the descendants of the Middle Eastern farmers, probably numbered no greater than ten to fifty thousand. This blend of hunter-
forensic and ancient DNA studies where the DNA is degraded and difficult to extract, such as in material from archaeological burial sites. Since the analysis of molecular lineage is not compromised by recombination, and the high rate of evolution of the DNA allows the accumulation of substituted nucleotides over time periods relevant to population evolution, these properties are useful in the reconstruction of human population history.

From the foregoing population studies on mitochondrial DNA, it would seem evident that the people of Britain, over considerable millennia, have remained relatively unchanged genetically. How then can this be when the historical record that tells us of the Roman invasions complete with a supporting cast of followers from its provinces and territories throughout Europe, the Middle East and Africa? What of the genetic contribution from later Anglo-Saxon, Viking and Norman invasions, not to mention the various refugees and immigrants from elsewhere around the globe? The answer may lie in the sex of the genetic contributor since most invaders were unlikely to have been accompanied by their spouses.

Analyses based on mitochondrial DNA, with its matrilineal inheritance, ignore the contribution to the phylogeny by the male. As an illustration of the difference made by using the Y-chromosome, and its patrilineal inheritance, instead of mitochondrial DNA. Hurles and others have shown a population structure of Polynesia with 99 per cent of mitochondrial DNA predating the European arrival. They found, however, that at least a third of their Y-chromosomes were derived from an exclusively male post contact group of sailors, traders, whalers and missionaries. Analyses using the Y-chromosome perhaps may provide a useful comparison to mitochondrial DNA for population origins and mixtures for ancient Britons.

Helgason and others in their estimates of the Scandinavian and Gaelic ancestry of the male settlers of Iceland, have found that 20-25% of the founding males had Gaelic origins while the remainder were of Norse extraction. The data were derived from comparable differences between Icelanders, Scandinavians and Gaels from Scotland and Ireland by an analysis of DNA from present day populations.

The findings of Helgason and his group, who used molecular genetics to trace patrilineal and matrilineal descent of the population of Iceland is supported in particular by archaeological and historical evidence of population movement during the Viking era from the late eighth to eleventh centuries AD. Their reports show that Iceland was colonized by a male warrior society, which is in keeping with a present day population of 75% Scandinavian origin.

Presently further studies are being undertaken on the present British population, using the Y-chromosome to ascertain the contribution made to the genetic pool by past invaders and colonizers of prehistoric and historic Britain. Studies such as this offer an insight into the effect of those unattached males on the indigenous population, which at present reflects, in the main, the matrilineal lineages determined by mitochondrial DNA analysis.
Kevin O’Toole: A Barrister & Solicitor who dabbles in Ancient Greek and Latin and has an interest in the archaeology of Athens.

In February I went to Athens to advance some work I am doing in relation to the comparative study of legal systems. The Ancient Greek (in particular the Athenian) legal systems and the Roman legal system are obviously subjects of more than a little interest in connection with the history and development of jurisprudence.

In any event, through the generous intervention of Dr Judith Maitland of Classics and Ancient History at UWA, I was able to meet Professor John Camp at the offices of the American School at Athens in the Stoa Attalos in the Agora. Professor Camp is a leading authority on the archaeology of Greece and a foremost authority on the archaeology of the Agora area.

From my meeting with Professor Camp and the introduction he gave me to some of the less well known artifacts and sites of legal significance found in the Agora, it was easy to be reminded of what a magnificent undertaking have been the Agora excavations, whose modern phase has been going on since 1930.

It is impossible in the short space available here to give anything like a real indication of the scale, detail, and importance of the discoveries made in the Agora. The space here does however afford an opportunity to remind readers that whilst the artistic and intellectual achievements of Classical Athens quite naturally hold a pre-eminent position in our minds when we think of ancient Athens, Athens did have a Roman period (c.146BC to c.AD30). Indeed, it can be said that the Roman affection for Athens (if we overlook the depredations of Sulla in 86BC) did a vast amount to pass the achievements of Ancient Athens through to us.

The picture below is part of a torso of a large marble statue of the emperor Hadrian (AD 117—138) which stands in the Agora. The picture shows part of the cuirass which has a scene of Athena supported by the wolf of Rome, with Romulus and Remus, the mythical founders of Rome, underneath. Sadly, the statue has suffered substantial defacement.

There were many statues of Hadrian in Roman Athens, but the Agora statue is the only one that has at least in part survived.

Hadrian had great affection for Athens, and his benefactions included financing the completion of the huge Temple of Olympian Zeus (the Olympieion) a substantial part of which remains today. The Arch of Hadrian, a prominent landmark in Athens today, has the inscription on one side ‘This is Athens, the ancient [or perhaps “former”] city of Theseus’ and on the other side, looking towards the Olympieion and that part of Athens lavishly endowed by Hadrian, ‘This is the City of Hadrian and not of Theseus’.

The Athenians reciprocated Hadrian’s affection and made him one of their Eponymous Heroes.

For the Romans Athens had begun to be a centre of education and philosophy long before Hadrian. It had held a powerful place in the sentiments of such luminaries as Cicero, Horace and Ovid. For Cicero the Greek orators such as Demosthenes were of heroic proportions.

Another great work from the Roman period is the Theatre of Herodes Atticus (c.AD 160), next to the Acropolis. This Theatre remains an active venue.

In the Agora itself there were major structures even from relatively early in the Roman period, the remains of which have been uncovered in the Agora excavations. The most prominent amongst these is the Odeion (concert hall) of Agrippa (c.12 BC).

The Library of Pantainos (c.AD 100) has an extant dedicatory inscription referring to Athena and to the emperor Trajan (AD 98—117). Rules for this library have also been discovered in the Agora excavations. Thus: “No book is to be taken out, because we have sworn an oath.”

Some 150m to the east of the Agora a new market place was constructed during the reign of Augustus. The site has recently been undergoing major restoration works. The remains of the Library of Hadrian can be seen nearby.

In any general discussion of Roman Athens (or for that matter Archaic, Classical and Hellenistic Athens), one should pay homage to the Greek travel writer of the mid-2nd century, Pausanias. Of ancient literary sources Pausanias especially has both given direction to specific archaeological projects in the Agora and explained the results. Of Pausanias Sir James Frazer said:

“Without him the ruins of Greece would for the most part be a labyrinth without a clue, a riddle without an answer.”
Recent Travels and Writings Of David Kennedy

David Kennedy

David Kennedy was on Study Leave in the first semester of 2004 working on his new project in the hinterland of the Roman city of Jarash (Gerasa) in Jordan. He spent five weeks of his leave in Jordan on fieldwork (“Letter from Jordan” see page 10).

In late June he went to the UK for five weeks for the Tour of Roman Britain 2004 (see “Touring the Roman World” back page). In the second half of the second semester he will be in the United States from mid-September until the end of December. During that time he will be at the Institute for Advanced Study at Princeton in New Jersey where he has been elected to a research position to work on the literature search for his Jarash Basin Project in Jordan. The IAS has superb library facilities and idyllic surroundings — this is where Einstein spent the latter part of his career and life (without socks!).

For 2005, David Kennedy has been awarded a fellowship by the UK-based Cotton Foundation for 2004/5 to help support his fieldwork in Jordan in the first semester. As part of his longer-term plan for a major fieldwork programme in the basin of the city of Jarash (Gerasa), his intention is to begin with a project to record the remains in the immediate vicinity of the city itself which are rapidly being destroyed or damaged by the expanding modern town.

David Kennedy has two books published this year. *The Roman Army in Jordan* was originally published in 2000. A larger, updated second edition was published in May 2004. A limited number of copies are available through the author for $50 (a 30% discount)

In September 2004, *Ancient Jordan from the Air* was published in the UK, by the same publisher (CBRL/British Academy). The book is the outcome of several seasons of Aerial Archaeology in Jordan by David Kennedy and his colleague Bob Bewley. It is built around over 200 colour photographs of archaeological sites, almost half of them full A4 in size. The photographs are accompanied by extensive descriptive captions and the book is introduced by chapters on history, geography, and aerial archaeology. Although Roman sites are prominent in the landscape and in the book, the latter surveys the archaeology of Jordan from early prehistory to the British Empire.

The Painted Tombs of Abila — Anne Poepjes

Anne Poepjes. Anne is a Masters student at UWA (see page 4). In this article she relates a particularly interesting excursion she had last year during a study tour in Jordan.

Just before returning to Perth in October, 2003, I was fortunate enough to be given a guided tour of one of the painted tombs at Abila by Dr Mohammed Shunnaq from Yarmouk University.

These tombs, only discovered relatively recently (within the past 50 years), are exquisitely painted, and in most regions of the world would be jealously guarded and displayed to the public; however, the wealth of archaeology in Jordan is so vast that there is neither time, money, nor manpower to preserve these sites at the present time.

The first appearance of the tombs is a wrought iron gate (see photo page 4) originally blocking the site from the general public, now pushed inwards and used as a jumping point for all who want to enter (including myself!). The walls inside (see photo page 4) were originally completely painted and, in the dry atmosphere of the tomb, remained intact for centuries. Due to exposure to damp after discovery, much of the painted plaster has now either dropped off, or is covered with mould.

The human representations imply Christian burials. Whether or not that is a factor, the official response as to why sites such as this have fallen into ruin so quickly is always that there is never enough resources to conserve all finds.

In September 2004, I am attending a tour and study workshop of the tombs conducted jointly by The Friends of Archaeology and Yarmouk University. Hopefully some measures to preserve these tombs for future generations will be taken in the near future, before they disappear completely.
As part of my Study Leave programme for the first semester of 2004, I was able to spend almost five weeks in Jordan. There were various objectives ranging from being able to use the useful little library of the “British Institute of Archaeology” in Amman (aka The Council for British Research in the Levant) through to a new season of Aerial Archaeology.

Most of the first two weeks was taken up with library research interspersed with field visits to archaeological sites. The most notable of the latter were the traces of ancient roads to be seen around the Roman fort of Qasr eth-Thuraya some 50 km south of Amman. The fort is on an isolated plateau beyond the eastern edge of the agricultural belt and, though it was known to be on a north-south route of some kind, this was believed to be no more than a trail. Recently, during a brief period when such visits were possible, some Israeli archaeologists spotted traces of an actual constructed Roman road.

First alone, then with my research student Andrew Card, and then with a British colleague, Francesca Radcliffe, we walked several kilometres of this road. Parts were visible as fragments of a road foundation but north of Thuraya it could be traced as a full-width road with bordering kerbs, central spine and foundation stones running for at least a kilometre before recent efforts at farming had ploughed it into no more than a stony line running across the landscape. In a year or so it will be gone. A second part of the research was to be a few hours of flying. Beginning in 1997, I have been carrying out annual seasons of Aerial Archaeology in Jordan.

Aerial Archaeology is a regular activity in Britain where it was pioneered almost a century ago and now has a score or more of flyers/archaeologists taking to the air for hundreds of hours annually. It was simultaneously pioneered in the Middle East for which we have some of the very earliest air photos of archaeological sites anywhere in the world (mainly taken by German pilots in 1917 and 1918). However the flying came to an end in 1939 and the entire Middle East has remained a no-go area for Aerial Archaeology since. This is a particular tragedy there because of the exceptionally rapid pace and enormous scale of development which is so destructive for archaeological remains. Jordan is now the only country in the Middle East to allow Aerial Archaeology and, together with my friends and colleagues Bob Bewley (of English Heritage, since 1998) and Francesca Radcliffe (a free-lance aerial archaeologist, since 2001), I have been able to do a few hours annually in helicopters of the Royal Jordanian Air Force. This year we managed about 7 hours spread over 3 mornings – a pitance but the best we can manage with the resources available.

One of the perks of the flying is that this year, we were again invited to what is effectively a private display put on by the Jordanian aerobatics flying team, the Falcons and the British Red Arrows. The latter train in Cyprus each spring and, because of the long and close links with the Jordanian royal family, are regularly invited to Amman to put on a display at the air base from which Bob, Francesca and I fly. This year, with Bob and Francesca still in the UK at the time, I was able to take along four young female archaeologists at the British Institute instead who then went into raptures as the pilots turned up later at the Ambassadors garden party in their honour still wearing their vivid red jump suits and looking very dashing (I’m told).

An amusing end to my trip came with my being cornered by the manager of a local restaurant who had been trying to get me to join him on a trip to his “farm” near Amman where, he claimed, highly tell-tale rock-carvings pointed unmistakably to the presence of “treasure”. Numerous people are absolutely convinced that gold and treasure litter the landscape though few people know anyone at first hand who has actually found any. This proved to be no exception – the “snake’s head” carving was no more than an odd little bump on a rocky cliff and the supposed cemented up door in the cliff-face was also just a geological formation. The whole outing was enlivened by our having to reach these items through a batch of beehives whose occupants chased and stung us for our trouble.
THE ANTONINE WALL —— The Scottish Answer to Hadrian’s
Rae Metcalf

Visitors to Scotland who are interested in Roman Britain should enjoy a visit to the Hunterian museum in the University of Glasgow. Among the Museum's Roman collection are what have been named 'distance slabs'. These are large, stone tablets, which have been discovered in central Scotland near to the line of that other Roman wall which Emperor Hadrian's successor, Antoninus Pius, ordered to be built in about AD142. The Romans no doubt built the wall as a measure to ensure a Scottish element in the Roman Empire!

The Antonine Wall, ran for a distance of thirty-seven miles (sixty kilometres) from Old Kilpatrick on the River Clyde to Bridgeness on the Forth. In contrast to Hadrian’s Wall, this more northerly barrier had a turf rampart set on a stone base with a broad ditch (see photo) to the north and a road, the Military Way, on its southern edge.

The Wall was built by detachments from the Roman legions (the Second, the Sixth and the Twentieth) stationed in Britain during the reign of Antoninus Pius. The 'distance slabs' were designed to record the length of Wall completed by each legion. The slab pictured below comes from Hutcheson Hill near Bearsden and was ploughed up as recently as 1969. An inscription records that the Twentieth Legion completed a 3000-foot section of the Wall.

The members of the 2003 Roman Britain tour group were fortunate to have Professor Lawrence Keppie, a world authority on these 'distance slabs', explain the significance of the Hutcheson stone. The taller figure in the central niche is probably Britannia placing a wreath into the beak of an eagle – a standard of the Twentieth Legion. The bearer of the standard is, evidently, suitably awed by the proceedings. In the side niches are figures representing the defeated southern Scottish tribes. The unfortunate captives appear to be supporting Latin-inscribed shields on their shoulders. The running boar at the base of the slab is the symbol of the Twentieth Legion.

The 2003 group also visited the site of one of the forts attached to the Antonine Wall at Rough Castle, not far from modern Falkirk. This fort, the second smallest on the Wall, only occupied one acre.

Very interesting was the fact that the Romans had established defensive pits just northwest of Rough Castle fort. These pits, known as lilia, held pointed stakes but were covered with brushwood and leaves to give the impression that the ground was solid.

The Antonine Wall served as a frontier barrier for some twenty years. It was abandoned in 160 and Hadrian's Wall thence once again marked the northern extent of Roman Britain.

Rae Metcalf is a retired teacher of English Literature. The photographs on this page were taken by Rae during the Roman Britain Tour 2003.
Roman Archaeology at UWA

Scholarships in Roman Archaeology

The first three of these new scholarships have now been awarded.

Anne Poepjes, working part-time on a Master’s thesis at UWA on cultural heritage in Jordan, has been awarded the first scholarship to support her plans to spend an entire year in Jordan from the end of July this year.

The second and third awards were made by the committee to Karen Henderson and Felix Hudson, final year students at UWA who have taken a number of units in Classical Archaeology, to support their participation in an American-Romanian excavation at the important site of Tropaeum Traiani near Bucharest in Romania.

Touring the Roman World

The Roman Britain Tour 2003.

In July 2003, David Kennedy, Emmie Lister and Nigel Wright met at Canterbury in the UK with a group of thirty students, former students and members of the wider community to begin a three week Study Tour of Roman Britain. The tour is reported on at page 3 in this Newsletter.

The Roman Britain Tour 2004.

A second tour of Roman Britain began at Canterbury on 3 July 2004.

Middle East Tour May 2005

Plans are in progress for a tour to the Middle East for three weeks in May 2005 – “Journey to Ancient Jordan (plus Syria and Lebanon)”. You can read more about the last of these on the UWA Extension website at: www.extension.uwa.edu.au

All of these tours are open to anyone interested.

UWA Extension Courses

Following successful courses by Professor Kennedy on “Roman Britain: Invasion and Conquest” in 2002 and “Hadrian’s Wall” in 2004, a further course was offered in August 2004 “Petra, the Nabataeans and the Roman Empire” at both the normal UWA Campus location and as a repeat at a Hills location at Kalamunda. The courses were four two-hour classes, once a week for four weeks. A third of the attendees were at Kalamunda implying scope for developing such regional locations for people unable to travel to Nedlands in the evening.

Readers of UWA Extension brochures will have noted also courses being offered by Dr Brian Brennan (most recently “Romans on the Bay of Naples”).

For "Bread and Circuses".

David Kennedy and Glenys Wootton plan to offer a short Extension course in January/February 2005 on Gladiators and violent entertainment in the Roman world.

Further such courses will be offered in 2005. Readers can look out for them on the UWA Extension website: www.extension.uwa.edu.au

Membership of The RAG

Membership of the RAG is open to anyone interested in Roman Archaeology or classical studies generally. There is an annual membership fee of $25 (inclusive of GST).

To apply, complete and post the form with this edition of the RAG or contact the committee members at the addresses below.