The International Review of Ancient Art & Archaeology

# MINERVA

MARCH/APRIL 2016

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## Father of invention

A look at Leonardo da Vinci's ingenious mechanical designs

## Queen of the desert

The adventurous life of Gertrude Bell re-examined

## Underground Rome

Exploring the subterranean secrets of the Eternal City

# *The power of Pergamon*

**A new exhibition at the Metropolitan Museum in New York shows how Pergamon and other Hellenic cities flourished after the death of Alexander the Great**



**David Gibson** tells us why finding a Late Bronze Age site in Cambridgeshire is the discovery of a lifetime

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# *royal-athena galleries*

*Jerome M. Eisenberg, Ph. D., Director*

*Est. 1942*

*EGYPTIAN OLD KINGDOM POLYCHROME LIMESTONE RELIEF showing four bronzed males wearing white kilts processing to the right, balancing on their shoulders and extended left hand trays with offerings of vases, provisions, and a small calf; extensive red, black, green and yellow pigments remaining.*

*Saqqara, Vth-VIth Dynasty, ca. 2498-2181 BC.*

*Ex old French collection; M.B. collection, Woodland Hills, California, acquired from Royal-Athena in 2002; K.O. collection, New York, acquired from Royal-Athena in 2012.*

**Exhibiting at**
**The European Fine Art Fair,**
**Maastricht 11-20 March 2016**

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***The Akropolis of Pergamon*, pen and ink with watercolour, by Friedrich (von) Thiersch, 1882. H. 198cm. W. 350cm. Antikensammlung, Staatliche Museen zu Berlin. © SMB/Antikensammlung. See pages 14 to 19.**

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# contents

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## Features



## Regulars







# Going underground

Whether in Turkey or Israel, in London or Rome, or the Cambridgeshire Fens, the past is not only behind us but also beneath our feet waiting toreveal itself

Archaeologists are more aware than most that the past – its crimes, its treasures, its domestic life – is buried just beneath our feet. In our news section, for example, we report on evidence unearthed of Caesar's massacre in Holland; a number of mysterious headless skeletons disinterred in York; Roman artefacts found during roadwork on the A1; and a medieval painted panel that survived being damaged by iconoclasts to emerge pristine from under layers of varnish, among other things.

Meanwhile, in Cambridgeshire, the finds made during an excavation of a Late Bronze Age site have been compared to those at Pompeii. Why? Because when the huts of the settlement, built on stilts over a river, caught fire, the inhabitants fled leaving all their possessions. Some items fell into the water and many domestic objects survived, including pots containing traces of food – one even still had a spoon in it – as David Gibson, the Archaeological Manager of the Cambridge Archaeological Unit tells us in our interview on pages 38 to 41. For him, he says, the Must Farm site represents 'the discovery of a lifetime'.

Over in the warmer climes of Israel Dr Eric Cline, Professor of Classics and Anthropology at the George Washington University, has been overseeing the excavation of Tel Kabri, the site of an extensive Middle Bronze Age Canaanite palace in Galilee, for several years. The longer his team works the more the building expands; he calls it 'the palace that keeps on giving'. More exciting still is the fact that fragments of blue Aegean-style fresco have been found, suggesting that Minoan interior decoration was in fashion at the palace – at least for a time. You can read more about it on pages 26 to 30.

In, or rather under, Rome, Dalu Jones has been looking at once-buried houses, temples and churches that are now (some for the first time) accessible to visitors. She describes her subterranean tour of the Eternal City on pages 32 to 37.

Many of the treasures of the past are buried underground but others were hidden away in caves until the 20th century. The Paleolithic cave paintings and sculpture of the Dordogne and Lot regions of France are not only stunningly beautiful and technically accomplished, but also give us food for thought. Standing in front of the outline of human hands stencilled on to a wall of rock around 25,000 years ago is a profound experience. How, why and by whom these images were made remain questions to which there are no definitive answers, which is perhaps part of their magic. To find out more turn to pages 42 to 46.

The power of Pergamon and other Hellenic cities only really developed after the death of Alexander the Great in 323 BC. In spite of the destruction he wrought, somehow he also managed to plant the seeds of civilisation wherever he went and they grew and flourished with remarkable results. Some splendid examples of the art treasures produced during this cultural flowering are currently on show in *Pergamon and the Hellenistic Kingdoms of the Ancient World* at the Metropolitan Museum in New York, as you can see on pages 14 to 19.

Gertrude Bell was definitely a woman with hidden depths – a writer, traveller, diplomat, archaeologist and, some would say, spy – who explored the Middle and Near East and documented many of its ancient sites. We asked Lisa Cooper, the author of a new biography of Miss Bell, to tell us more about this intrepid Englishwoman and her contribution to archaeology; see pages 20 to 25.

Leonardo da Vinci is probably the best-known artist in the world and the *Mona Lisa* is certainly one of the most famous portraits ever painted – but he was also a prolific and inventive designer. When he died the notebooks containing his sketches for all sorts of ingenious machines were stored away and 'lost' to the world for several centuries. Now they are being celebrated in an exhibition entitled *Leonardo da Vinci: The Mechanics of Genius* at the Science Museum in London. To find out more turn to pages 8 to 12.

Although our saleroom reports, book reviews and quiz are, as usual, 'hidden' at the back of the magazine they are packed with interesting information and are all well worth a look – and don't forget our useful Calendar on pages 56 to 61.



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**Lisa Cooper**

is an Associate Professor of Near Eastern Archaeology at the University of British Columbia in Vancouver, Canada. She has conducted archaeological fieldwork in Syria, Turkey and Iraq over the past 30 years. Besides her research on Gertrude Bell, Professor Cooper has studied the Bronze and Iron Ages of the ancient Near East; she has a special interest in the origins and development of early cities and ancient Mesopotamian pottery.

# inthenews

**Recent stories from the world of ancient art and archaeology**

# Caesar's merciless massacre in Kessel

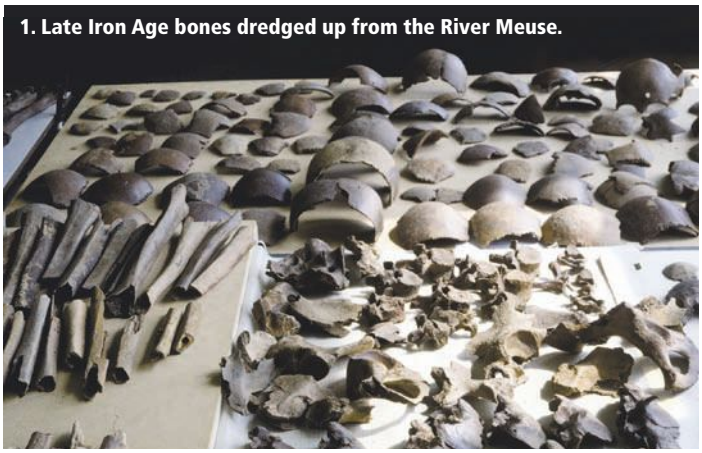
Archaeologists from Vrije Universiteit in Amsterdam have pinpointed the site of a battle, recorded by Caesar during his *Gallic War*, in which he massacred two Germanic tribes.

Professor Nico Roymans has used extensive archaeological evidence (both arms and skeletal remains) found in Kessel and Caesar's own written account, to establish that this battle, the earliest known on Dutch land, took place at the confluence of the Rivers Meuse and Waal (a distributary channel of the Rhine) some 120km from the coast, near the villages of Kessel and Heerewaarden. This proves for the first time that Caesar and his men set foot on Dutch soil.

The Tencteri and the Usipetes, Germanic tribes from the east of the Rhine, migrated across the river and submitted appeals to settle in this part of the Dutch river area. Caesar refused their request for asylum and launched a brutal attack on their camp in the spring of 55 BC.

He related these events and the grim slaughter that followed in his *Gallic War* (4.14-15): '*… such of them as could readily get their arms, for a short time withstood our men, and gave battle among their carts and baggage wagons; the rest of the people,* [consisting] *of boys and women (for they had left their country and crossed the Rhine with all their families) began to fly in all directions; in pursuit of whom I sent the cavalry.*

*'The Germans when, upon hearing a noise behind them,* [they looked and] *saw that their families were being slain, throwing away their arms… fled out of the camp, and when they had arrived at the confluence of the Meuse and the Rhine, the survivors despairing of further escape, as a great number of their countrymen had been killed, threw themselves into the river and there perished, overcome by fear, fatigue, and the violence of the stream.'*



**1. Late Iron Age bones dredged up from the River Meuse.**

Between 1975 and 1995, the dredging of an old river bed of the Meuse, near Kessel, revealed numerous Late Iron Age metal finds, indicating that a battle had taken place in the area. During the 1990s, local amateaur archaeologists Leo Stolzenbach and Anton Verhagen found many swords and spearheads, German belt hooks and a helmet, most of which date from the early 1st century BC, in the area. Some of the iron swords had been bent or folded, perhaps as part of a ritual in which the victorious Romans disposed of their victims' weapons and remains.

A mass of skeletal remains of men, women and children, – some with clear signs of injuries inflicted by swords and spears, were also found in Kessel. Radiocarbon dating has determined that these bones are also from the Late Iron Age.

Lisette Kootker (a PhD student in bioarchaeology at Vrije Universiteit Amsterdam) conducted isotope analysis on the dental enamel of three individuals. Examining their strontium values, she found that they were not natives of the Dutch river area, which supported Caesar's description of the Tencteri and Usipetes who originated from an area east of the Rhine.

Some 430,000 men, women and children were allegedly killed but, Professor Roymans says, this figure is '*undoubtedly highly exaggerated*'. He suggests a more realistic (still horrific) estimate of a massacre of between 150,000 and 200,000.

'*Considering Caesar's detailed account of the battle against the Tencteri and Usipetes and the archaeological evidence discovered*,' he says, '*the question arises as to whether or not this can be referred to as genocide. Although Caesar does not explicitly express the intention to eradicate these German tribes, he must have realized that his actions would in fact result in, at the very least, the partial destruction of these ethnic groups.*

*'Interestingly, there were no moral objections in the Roman political culture of that time to the mass murder of a defeated enemy, certainly not when it involved barbarians.*

*'This explains why, in his accounts of the battle, Caesar provides detailed descriptions without any shame of the use of mass violence against Gallic and Germanic population groups who opposed the Roman conquest.*'

**Lucia Marchini**

**2**

**3**



**2. Replica of a mid-1st century BC iron helmet worn by a Gallic rider in Caesar's army (original from Kessel).**
**3. A woman's skull pierced by a throwing spear – no one was spared in the massacre, not even the children.**

# Off with their heads

When the York Archaeological Trust (YAT) excavated Driffield Terrace in York between 2004 and 2005, they found some 80 Roman skeletons, 60 of which were virtually complete. The skeletons were largely male and under 45 years of age but, most strikingly, many of them had been decapitated and buried with their skulls in various positions, some on their chests, some between their legs, and some at their feet. Archaeologists conjectured that these men had been gladiators, but they also considered the possibility that they were soldiers or criminals.

Now, an international team (including experts from Trinity College Dublin, the Universities of Durham, Reading, Sheffield, and York, University College London, York Osteoarchaeology Ltd, the University Medical Centre in Utrecht, the City of York Council and the Natural History Museum) has been using groundbreaking genome technology to find out where these mysterious Romans came from and whether they were indeed gladiators.

Christine McDonnell, Head of Curatorial and Archive Services for York Archaeological Trust, commented on the significance of these analyses:

'*Archaeology and osteoarchaeology can tell us a certain amount about the skeletons, but this new genomic and isotopic research can not only tell us about the body we see, but about its origins, and that is a huge step forward in understanding populations, migration patterns and how people moved around the ancient world. This hugely exciting, pioneering work will become the new standard for understanding the origins of skeletons in the future, and as the field grows, and costs of undertaking this kind of investigation fall, we may be able to refine our knowledge of exactly where the bodies were born to a much smaller region. That is a remarkable advance.*'

Seven of the 80 skeletons were chosen by the University of Reading's Dr Gundula Muldner, the University of Durham's Dr Janet Montgomery, and York Osteoarchaeology Ltd's Malin Holst and Anwen Caffel for whole genome analyses. It was found that most of these skeletons had genomes similar to an earlier Iron Age woman who had been found in Melton, East Yorkshire. Most would have had brown eyes and black or brown hair, apart from one who had blue eyes and blond hair.

Other analyses revealed differences in isotope levels, suggesting that some of the 80 Romans spent their early years outside Britain.

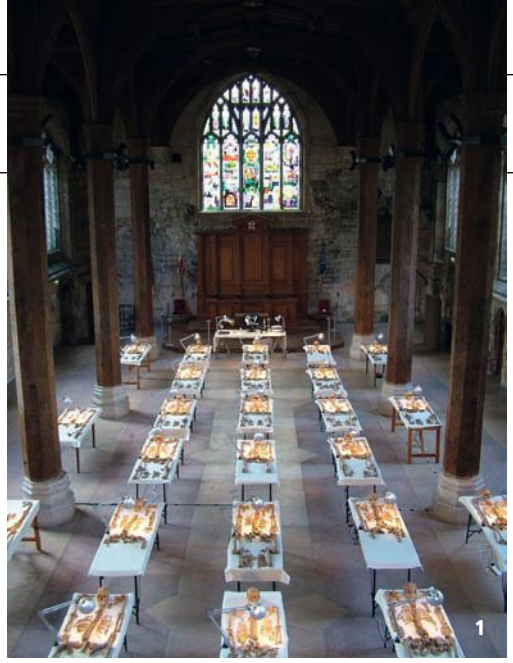
Studying the skeletons also showed that many had suffered significant injuries and were perhaps used to fighting with weapons, and that they were in general taller than the average Romano-Briton man. They also exhibited signs of childhood deprivation, indicating that they may have been local men who had experienced stress early in their lives.

Genome analysis carried out on one of the decapitated Romans showed that he came from the Middle East and later moved to Britain. Professor Dan Bradley from Trinity College Dublin's Molecular Population Genetics Laboratory commented on this discovery:

'*Whichever the identity of the enigmatic headless Romans from York, our sample of the genomes of seven of them, when combined with isotopic evidence, indicate six to be of British origin and one to have origins in the Middle East. It confirms the cosmopolitan character of the Roman Empire even at its most northerly extent.*'

The team have published the research in their paper 'Genomic signals of migration and continuity in Britain before the Anglo-Saxons' in *Nature Communications*. (http://www.nature.com/ncomms/2016/160119/ncomms10326/full/ncomms10326.html)

**Lucia Marchini**



**1. The Roman skeletons from Driffield Terrace laid out in York's Guildhall.**

YORK ARCHAEOLOGICAL TRUST

**2. A decapitated skeleton found at Driffield Terrace in Sheffield.**

**3. One of the skulls found at the same site.**

PHOTO 2: YORK ARCHAEOLOGICAL TRUST. PHOTO 3: YORK OSTEOARCHAEOLOGY LTD

# A1 archaeology

**An impressive haul of more than 177,000 artefacts has been unearthed along the A1 road between the villages of Leeming Bar and Barton in North Yorkshire. A team of about 60 archaeologists has been excavating along the road for two years as part of a key Highways England roadworks project to upgrade the A1 to a motorway. The A1 runs by the Great North Road, which was a busy and important route for the Romans.**

**Highways England Project Manager Tom Howard explains how today's drivers and road-builders are following in the footsteps of the Romans:**

'*It is fascinating to discover that nearly 2,000 years ago the Romans were utilising the A1 route as a major road of strategic importance and using the very latest technological innovations from that period.*

'*We are doing the same thing today, using the latest technology to improve this important route and significantly reduce journey times.*'

**Sieving through more than 50 tonnes of sediment samples, archaeologists found a large numbers of Roman objects. One of the most significant finds**

# Judas saved

***The Kiss of Judas*, *circa* 1460, oil painting on oak boards, H. 173cm. W. 74.3cm.**

PHOTOGRAPH: CHRIS TITMUS © HAMILTON KERR INSTITUTE & FITZWILLIAM MUSEUM.

*The Kiss of Judas*, a rare surviving English medieval panel painting has been given a new lease of life after conservation at the Hamilton Kerr Institute in Cambridge.

Surprising new evidence discovered by conservators shows the painting owes its survival to recycling during the Protestant Reformation of the Church in England.

Now on display at the Fitzwilliam Museum in Cambridge, *The Kiss of Judas* is one of the rarest artworks of its type. At the time of the Reformation, beginning in the 16th century and, later, during the English Civil War, church paintings were destroyed in their thousands. Few have survived and many of them are defaced – but miraculously *The Kiss of Judas* escaped.

Painted *circa* 1460 in bright oil colour, with details picked out in silver and gold leaf, this lively scene is all the more surprising because it depicts the moment of Christ's betrayal by Judas Iscariot. Devout parishioners often scratched or gouged out images of the hated figure of Judas so, in its time, it would have been at risk from both Catholic and Protestant iconoclasts.

When the panel arrived for conservation, it bore a considerable layer of surface dirt, bat faeces and heavily discoloured varnish, which made it difficult to see the image.

State-of-the-art, non-invasive technology including x-ray analysis and assessment using infra-red and ultraviolet light was used to identify details, pigments and possible areas of fragility. Cleaning, protection of the wood from further insect damage, and a new layer of modern varnish have now preserved the object for generations to come.

But it was a discovery on the back of the boards that revealed the remarkable story of how this painting had survived. The reverse had been covered with a fairly modern backing board of plywood. When the conservator Dr Lucy Wrapson removed it, she found faint traces of writing, which infra-red photography revealed to be 16th-century lettering, proving that the painting had been recycled during the Reformation. The offending image had been turned round and the back of the panel had been painted – perhaps with the 10 Commandments – suitable for use in a Protestant church.

'*We cannot know for sure why the painting was re-used in this fashion, perhaps it was simple economy, reversed so it could still fit the space for which it was intended*,' said Dr Wrapson, '*Or perhaps it could have been deliberately saved. The painting is fascinating, and conservation and cleaning has revealed the vibrant original medieval colours.*'

Dated by dendrochronologist Ian Tyers, this painted panel is made of oak boards imported to England from the eastern Baltic. By examining the growth rings, he calculated that the oak tree was felled after 1423 and its wood was made into a panel between *circa* 1437 and 1469.

Later in its life, probably during the 19th century, a fourth board was tacked on from a damaged original companion painting, *The Flagellation of Christ*. This was then overpainted to match the style of *The Kiss of Judas*. Remarkably, this section of T*he Flagellation of Christ* came from the same original, larger painting as *The Kiss of Judas*, which once formed part of a cycle of paintings depicting the Passion of Christ.

The painting shows Christ's betrayal by Judas Iscariot with St Peter sheathing his sword, having cut off Malchus' ear in an attempt to defend Jesus. Malchus was the servant of the Jewish High Priest Caiaphas. The diminutive form of Malchus is in the foreground, as is his severed ear. At the top of the painting is a frieze composed of 'IHC' the sacred monogram of Christ, crowns and sunbursts. At the bottom is a prayer in vernacular English which reads:
*Jhesu mercy and eue[r] mercy*
*Ffor in thy mercy fully trust.*

*The Kiss of Judas* was first recorded at the Church of St Mary in Grafton Regis, Northamptonshire. In 2012, the painting was purchased by the Fitzwilliam Museum from the church, which did not have the funds to conserve and maintain it. But, as it is forbidden for churches to sell historic artefacts in their possession, a special Faculty had to be obtained from the Diocese of Peterborough. This allowed the sale of the painting to the Fitzwilliam via a private treaty sale.

As a result of the sale, the Church of St Mary was able to repair its roof and other features. A replica of the picture will be displayed there in due course; the original painting is now hanging in the Rothschild Gallery of the Fitzwilliam Museum. (Visit www.fitzmuseum.cam.ac.uk)

**Lindsay Fulcher**

**is a rare, copper alloy cicada brooch (1) from Pannonia in Eastern Europe, unearthed in Catterick, which was first occupied by the Romans *circa* AD 80. This discovery suggests either that this area of ancient Britain had a culturally diverse population, or that it traded with other remote parts of the Empire. A Roman cemetery of 246 burials, from the 1st and 3rd centuries AD, has been excavated at Bainesse. Here, well-preserved grave goods, including pottery (2), jewellery, pieces of local Whitby jet and hobnail boots, were found among the human remains.**

**Digs at Scotch Corner yielded a miniature sword with an iron blade, a copper alloy scabbard, and a bone handle. Archaeologists have proposed that this may be an offering for the gods or, more simply, a small pocket knife. The evidence of a Roman settlement at Scotch Corner, dating back to AD 60, suggests the Romans arrived in Yorkshire around 10 years earlier than was thought.**

**Dr Hannah Russ of Northern Archaeological Associates commented on the finds: '*The quality and preservation of the artefacts and environmental remains from this scheme is outstanding. We are learning so many new things about the people who were living in the vicinity of the A1 in the past.*'**

**Excavations have now drawn to a close, but archaeologists continue to study the A1 finds, which will eventually go on display in North Yorkshire.**

**Lucia Marchini**

# All under London

A series of extraordinary object-focused photographs taken by the renowned landscape photographer, Simon Norfolk, are on show at the Museum of London in a display called *Under London*. These stunning images reveal how the capital's long, colourful story can be told by the rich variety of objects found beneath its streets.

In Simon Norfolk's photographs, ancient objects excavated by Museum of London Archaeology (MoLA) at digs across the capital during the late 20th century have been placed in modern-day metropolitan settings, near the places where they were found, or in locations closely associated to the story they tell of this global city.

The objects range, chronologically, from a finely crafted Prehistoric axehead, from *circa* 4000 BC, shot in the Olympics Aquatic Centre, to a mass-produced commemorative plate made for Queen Victoria's Coronation in 1837 and photographed in front of Buckingham Palace.

Commissioned by *National Geographic*, Simon Norfolk's photographs examine the status of London as an ancient city, placed at the centre of Europe's biggest archaeological dig by the continent's largest infrastructure project – Crossrail. The archaeology-themed project delves into long sweeps of London's past, using the modern city as a counterpoint to the workings and discoveries below.

'National Geographic's *assignment to photograph London was something unique*,' says Simon Norfolk, '*being asked to roam across the width and breadth of the city but also under our feet into the thousands of years all piled on top of each other. All of my photography over the last 20 years has been the seeking out of this "layerednes". I wanted the photographs to follow an arc, beginning with simple artefacts, passing through the violence of conquest, the slow acquisition of culture and trade, and ending with intimations of a vast overseas empire and the dawn of mass industrialisation*.'

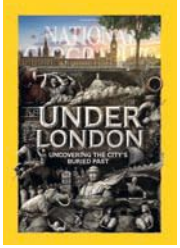
Roy Stephenson, Head of Archaeological Collections at the Museum of London, puts the *Under London* project in context: '*The huge number of archaeological excavations which have taken place in London since the middle of the 20th century have led to some amazing discoveries and as a result, the Museum of London is in the privileged position of having a truly rich collection of historical objects from pre-history to the 20th century. The* Under London *display really highlights how much our city's trade, industry, culture and inhabitants have changed and progressed*.'

The Museum of London houses 80,000 objects that tell the ever-changing story of this great world city and its people, from 450,000 BC to the present day.

Simon Norfolk has photographed some of the world's worst war zones and refugee crises; his last book, *Bleed* (2005), was about the aftermath of war in Bosnia. Over the past decade he has been probing into and stretching the meaning of the word 'battlefield' in all its forms, and he has even taken shots of the supercomputers used to design military systems or to test launches of nuclear missiles.

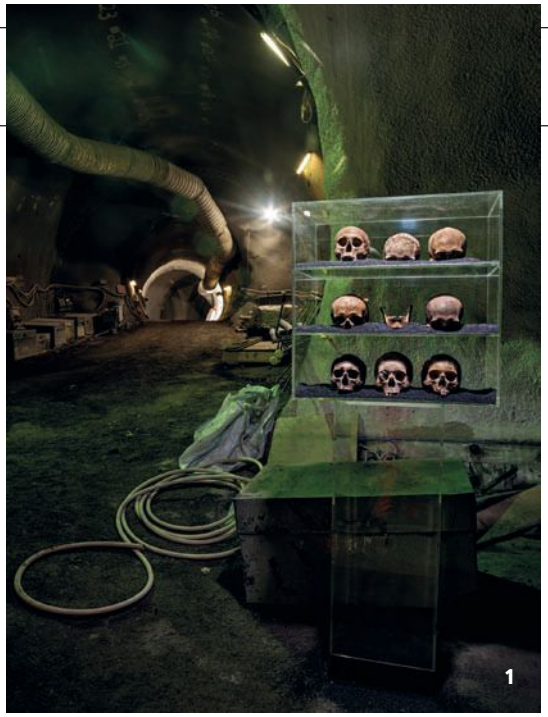
His photographs are in major collections such as the Museum of Fine Art, Houston, Deutsche Börse Art Collection, Frankfurt, and the British Council.

• *Under London*, a free exhibition, is on show at the Museum of London (www.museumoflondon.org.uk) until 3 July 2016.




• Illustrated by Simon Norfolk's images, a full feature entitled *London Down Under* by Roff Smith is published in *National Geographic* magazine's February 2016 issue.

**Lindsay Fulcher**



**1. Nine 2nd-century AD Roman skulls were found by archaeologists from MoLA in a channel of the now lost River Walbrook that flows through Crossrail's Liverpool Street site. These skulls have been photographed in the Crossrail tunnels, 40 metres below where they were found. Buried around 1900 years ago, the skulls had washed into a river channel, where smooth stones lodged in the eye sockets.**



**2. This great 2nd-century Roman sculpture (H. 65cm) is in the form of an eagle firmly grasping a writhing serpent in its beak. One of the best preserved sculptures from Roman Britain, it was discovered on the site of a Roman cemetery in the Minories, in the City of London, in 2013. Archaeologists believe that this eagle once adorned the mausoleum of a rich Londoner. Simon Norfolk places this ancient sculpture in front of St Paul's, where someone akin to a high-ranking Roman might be buried today.**



**3. An early Middle Neolithic axehead found south of Stratford High Street by MoLA archaeologists working on the site of the Olympic Park in 2008. It was photographed in the Olympic Aquatic Centre, one of London's most starkly Modernist structures. The construction of the Centre and other facilities for the 2012 Olympic Games in London's East End unearthed more than 10,000 artefacts, from this 4,000-year-old hand axe to gun emplacements from the Second World War.**

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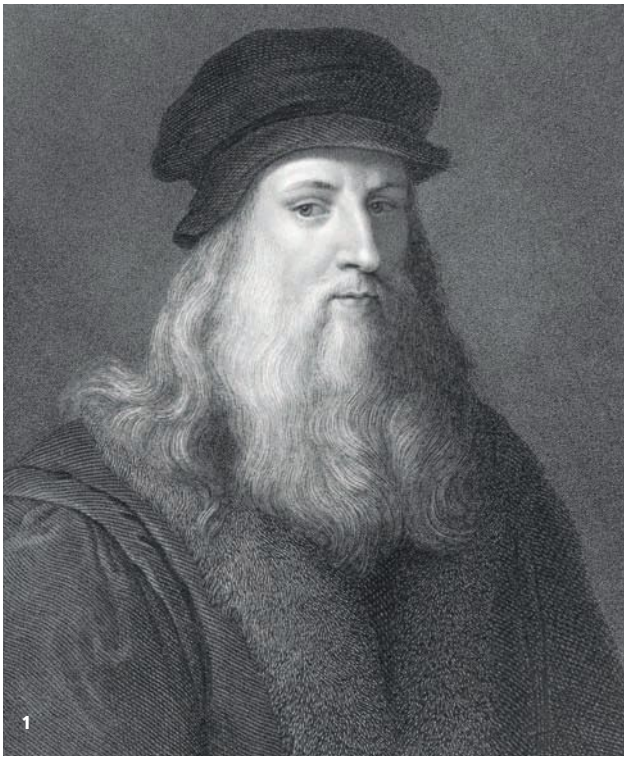
# The father of *invention*

Universally regarded as an artistic genius, Leonardo da Vinci was also an ingenious and prolific designer of machines inspired by his observation of natural phenomena – as a fascinating new exhibition on show at the Science Museum in London reveals, reports **Lindsay Fulcher**

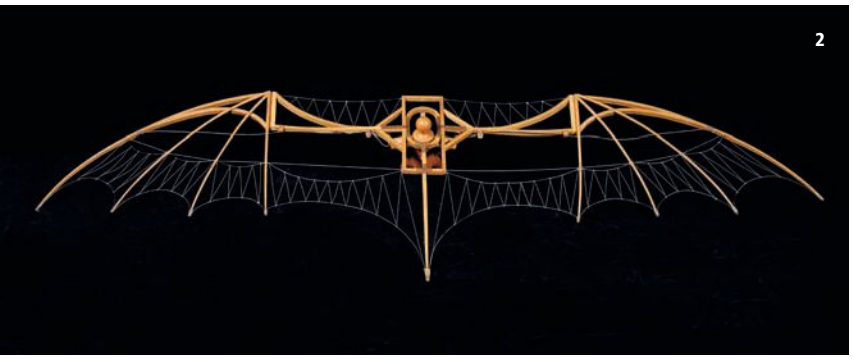


Universally acknowledged as a genius, the man who painted the most famous picture in the world, Leonardo da Vinci (1452-1519) was also a scientist, architect, mathematician and engineer. He was also a visionary inventor. The epitome of the Renaissance Man, he made detailed sketches of hundreds of innovative devices but, after his death, his notebooks were 'lost' from public view. As a result, these extraordinary designs have received far less attention than his better-known artistic output.

Now his ingenious ideas for improving almost every type of machine – from weapons of war and flying machines to water systems and industrial machinery – are being celebrated in the UK premiere of an international interactive touring exhibition entitled *Leonardo da Vinci: The Mechanics of Genius*. Devised by Universcience, Paris, in association with Museo Nazionale della Scienza e della Tecnologia Leonardo da Vinci in Milan, after opening in the French capital the exhibition went on to Munich and São Paulo. Now it has arrived at the Science Museum in London.

The exhibition includes 39 prototype models of flying machines, weapons and diving equipment built according to Leonardo's designs in Milan and exhibited there in 1953 to celebrate the 500th anniversary of his birth. A number of objects, made for the same reason in the same year for an exhibition staged at the Royal Academy in London, are in the Science Museum's own collection. A selection of these, relating to Leonardo's ideas in the areas of mechanics, manufacturing and flight, are on display at the entrance to the current exhibition.

Leonardo was born, out of wedlock, to a notary named Ser Piero da Vinci and a peasant woman called Caterina on 15 April 1452, in a small town called Vinci near Florence. He was educated in the studio of the renowned Florentine painter Andrea del Verrocchio. At the age of 20, he was employed in a workshop on the site of Florence cathedral. Influenced by such eminent artists, engineers and mathematicians as the architect Brunelleschi, one of the creative



**1. Oil pigment print from an engraving made by Benjamin Thomas Pouncy in 1864 showing Leonardo da Vinci *circa* 1500. © UIG/Science and Society Picture Library.**

**2. Model of the glider designed by Leonardo, inspired by his observation of the wing structure of birds. 345cm x 52cm x 115cm. © Alessandro Nassiri/ Museo Nazionale della Scienza e della Tecnologia Leonardo da Vinci.**

giants of the Renaissance, Leonardo started to make drawings of cranes and other machinery, often trying to improve on the efficiency of existing designs and processes.

The exhibition takes the machines that Leonardo drew and reinterprets them in three-dimensional form, alongside interactive games and multimedia installations. Through his drawings he demonstrated a unique ability to recognise solutions to engineering problems in the world around him, and translate these into remarkable new concepts for machines that foresaw many aspects of the modern world.

The legendary painter of the *The Last Supper* (1495-98) and the *Mona Lisa* (1503-17) was an extraordinary draughtsman, and this set his work apart from that of his contemporaries. But Leonardo did not publish the drawings of his miraculously inventive designs during his lifetime and, after his death on 2 May 1519, they were stored and forgotten for several centuries. So

**3. The *Imagining Flight* section of the exhibition shows how Leonardo observed the flight of birds and used what he saw to design flying machines, including a glider and one with wings that could be flapped manually. © EPPDCSI/Ph Levy.**

**4. Designed by Leonardo, a model of a flying airship, with wings that could be flapped by the use of levers. 273cm x 137cm x 86cm. © Alessandro Nassiri/ Museo Nazionale della Scienza e della Tecnologia Leonardo da Vinci.**


the fruits of all his acute observations, long-term research and brilliant draughtsmanship were for a long time lost to the world and unable to influence the scientists and engineers who followed him.

According to Giorgio Vasari (in his *Lives of the Most Eminent Painters, Sculptors, and Architects*, published in 1550) Leonardo not only had extraordinary powers of invention, but '*outstanding physical beauty*', '*infinite grace*', '*great strength and generosity*' and a '*regal spirit and tremendous breadth of mind*'. The artist also had a great respect for life. He was a vegetarian and often, Vasari tells us, purchased caged birds in order to release them. But he may have had a more selfish interest in this seemingly charitable act, as it allowed him to observe


closely how birds actually flapped their wings and flew.

Flying machines, diving apparatus and weapons are among 39 historical models from Milan that are displayed across different sections of the exhibition, which each focus on a specific area of Leonardo's knowledge and expertise: *Transforming Movement, Preparing for War, Drawing Inspiration from Nature, Imagining Flight, Improving Manufacturing* and *Unifying Knowledge*.

But was Leonardo really an inventor? Did he intend the machines that he drew to actually be constructed and used? In his essay *The birth of a collection in Milan: from the Leonardo Exhibition of 1939 to the opening of the National Museum of Science and Technology in 1953*, Claudio Giorgione of the Museo Nazionale della Scienza e della Tecnologia in Milan urges us to exercise caution when describing the artist as a practical inventor.

He writes: '…*With respect to the age-old issue of the practical execution of the machines Leonardo designed, it is important to emphasise that the inadequacy of motive powers and available materials, as well as the question of friction, made the actual operation of many of the sophisticated sequences of gears essentially impossible. Furthermore, Leonardo could not avail himself of the sum of collective experiences needed for the practical execution of his ideas, as he did not oversee a laboratory or a highly specialised or diversified workshop with all the essential professionals, such as carpenters, metalworkers and foundry men. Last but not least, it is important to note that Leonardo himself showed little interest in proceeding beyond the intellectual and graphic development of an idea to its practical implementation.*

*'Very often Leonardo's drawings constitute, rather, infinite variations on a given theme, reaching the proportions of a refined but impossible game. Examples of this can be seen in the series of frightful, visionary weapons, exercises of fantasy that re-elaborate the warfaring traditions from the Romans on to the Middle Ages, without any sort of practical finality, as in the ballistae or the fantastical idea of a covered war carriage.*

*'Many of Leonardo's ideas contained instances of great intuition, and can be considered precursors of inventions that would be refined only centuries later. The technical abilities then existing, the engines and materials available in that epoch often were inadequate for realising his ideas, even if this*

**5. Model of Leonardo's self-propelled cart. 198cm x 177cm x 118cm. © Museo Nazionale della Scienza e della Tecnologia Leonardo da Vinci/ Alessandro Nassiri.**

**6. In the *Improving Manufacturing* section there are examples of textile machinery designed by Leonardo for industrial processes. © EPPDCSI/Ph Levy.**

**7. This model of the Aerial Screw, designed by Leonardo in the late 15th century, has been seen as the prototype for a helicopter. 167cm x 167cm x 143cm. © Archivio Museo Nazionale della Scienza e della Tecnologia Leonardo da Vinci/Alessandro Nassiri.**

**8. Model of Leonardo's prototype parachute. 92cm x 92cm x 105cm. © Archivio Museo Nazionale della Scienza e della Tecnologia Leonardo da Vinci/Alessandro Nassiri.**

*limitation does not make them appear any less ingenious, on account of their anticipatory power.*

*'The risk... is that of attributing to Leonardo mental mechanisms or ideas contemporary to ourselves, and of considering him, improperly, to be an inventor of machines that were realised only centuries later.'*

These models include items by other Renaissance figures, including a large-scale crane devised by Brunelleschi. Leonardo's own inventions were a self-propelled carriage, an armoured vehicle, a spinning wheel with mobile wings, gears, a diving apparatus and various weapons. He is also credited with inventing the parachute, the helicopter and the tank.

In discovering how the great inventor was inspired by the natural world, the exhibition examines the influence that biomimicry still has on today's cutting-edge robotics and aeronautics.

Films show examples of modern-day inventions. Visitors can see the SmartBird, an ultra-light, aerodynamic and agile robot, inspired by the flight of the herring gull and developed by the Festo company in Esslingen, Germany. Like the machines that Leonardo designed, it beats its wings, glides and banks in the air like its natural avian model.

Biorobotics specialists design robots with functions inspired by abilities specific to certain animals: perception, mobility, autonomy, adaptation to the environment, and so on. Angels is an aquatic robot that can swim through murky water. It was designed by the biorobotics laboratory of the École des Mines de Nantes, assisted by numerous European partnerships. This robot, which moves like an eel, perceives its environment in a similar way that an electric fish does, and each of its 'vertebrae' is a module that can split off from the others and continue autonomously before joining back up to re-form the 'eel'.

Another idea from nature comes from spider silk. Its high resistance, finesse, elasticity and adherence, are properties that are coveted by scientists and manufacturers. Spider silk is a complex composite material. Its thread is structured in sequences alternating between highly ordered proteins and more disordered zones, which gives it those celebrated properties.

The biomaterials laboratory at the University of Bayreuth in Germany uses the *Escherichia coli* 'host' bacteria to produce the proteins which it then uses to make membranes or fabrics that have medical applications. Producing spider silk in industrial quantities remains a challenge but its potential uses in a variety of situations are numerous.

Analysing the functioning of sight and flight in flies and bees, testing it and reproducing it in bio-inspired micro-robots capable of safe aerial navigation was the multiple challenge facing researchers led by the team at the biorobotics laboratory at the University of Marseille/CNRS, who have produced the Octave robot. It has no need of an altimeter or on-board camera because the robot controls its flight in the way that a fly does, thanks to a special technique of mapping visual clues mathematically, called optical flow. This is all the robot needs to steer clear of obstacles and fly and land safely.

Reduction in energy consumption and noise pollution are two key problem areas for modern aeronautical engineers. Further improving efficiency and safety while reducing the ecological impact of airliners requires a technological revolution. Engineers at the Munich/Toulouse-based company Airbus, which is one

of the exhibition's sponsors, have turned to nature for solutions that can be used in the aircraft of today and tomorrow, including their Airbus A350. They have come up with a bio-inspired Concept Plane to showcase these promising areas of research.

When it comes to flying, lightweight construction is of crucial importance, but safety is just as critical. Nature knows about this: the bones of birds grow in a distinctive manner, adding material only where it is absolutely necessary, never too much or too little.

Engineers developing a new wing rib for the Airbus A380 sought to develop the lightest and safest possible structures and found their results were similar to the bone structure of an eagle's wing. Normally hidden from view is the 'skeleton' of the aircraft's wings, the rib that helps to reduce weight, which thus increases fuel efficiency and cuts emissions. By combining maximum strength with minimum weight, the new computer-aided design saves 500kg on each super-sized A380.

Airbus Group's Helicopters division has also developed a specialist composite material with remarkable properties, used as a filler in parts of the blade. This was inspired by the structure of the honeycomb, built by bees to protect honey and eggs. These qualities are reproduced in rigid, lengthwise walls and outstanding lightness.

Nearly 500 years after his death, Leonardo would have been fascinated to see all these new inventions that, like his own work, have been inspired by the observation of natural phenomena.

'*Leonardo da Vinci is one of history's greatest independent thinkers, whose determination to imagine the world anew inspired humankind for generations and will continue to do so for generations to come*,' comments Ian Blatchford, Director of the Science Museum. '*We hope this unique exhibition helps our visitors to understand more about his skilled and innovative approach to engineering and to be inspired to look afresh at the world around them*.'

The crowds that stand in front of the *Mona Lisa* in the Louvre seem hypnotised by her, gazing into her eyes as if they hoped to get a glimpse of the genius who created her. But perhaps a visit to *Leonardo da Vinci: The Mechanics of Genius* would give them a more penetrating insight into the restless and curious mind of this unique polymath. ■

**9. The *Preparing for War* section of the Leonardo da Vinci gallery at Cité des Science/Universcience, Paris contains models of Leonardo's designs for weapons for use on the battlefield and an armoured vehicle. © EPPDCSI/Ph Levy.**

**10. Model of an armoured vehicle, or covered war chariot, made to Leonardo's design. 286cm x 187cm x 144cm © Alessandro Nassiri/Museo Nazionale della Scienza e della Tecnologia Leonardo da Vinci.**

**• *Leonardo da Vinci: The Mechanics of Genius* is on show at the Science Museum in London (sciencemuseum.org.uk) until 4 September 2016. Pre-booking tickets is advised. This exhibition was designed and produced by Cité des Sciences, a Universcience site, in co-operation with the Museo Nazionale della Scienza e della Tecnologia Leonardo da Vinci and with the support of its industrial partner Airbus Group. This exhibition is supported by players of People's Postcode Lottery.**

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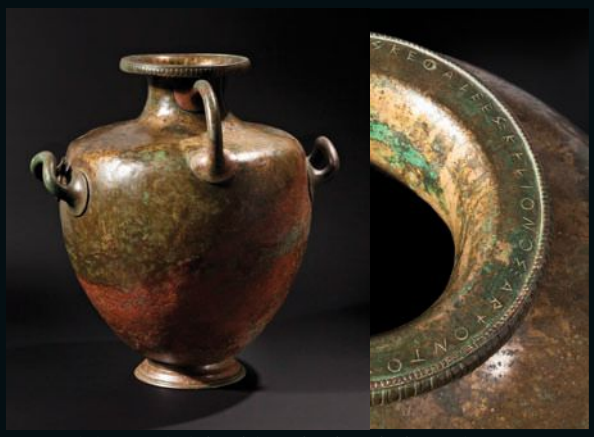
An early Etruscan bronze shield, Villanova Culture, 9th - 8th century B.C.



A Greek bronze kalpis with votive inscription, 4th century B.C.

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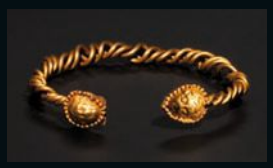
A Greek Chalcidian bronze helmet with inscription, 5th - 4th century B.C.

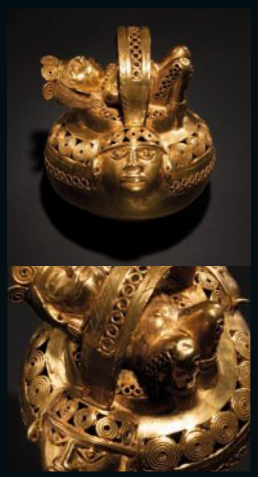


A Greek gold bracelet, Hellenistic period, circa 4th – 3rd century B.C.

A late Archaic, Attic eye-cup, late 6th century B.C.

AAntenna sword, bronze, Urnfield period, 2nd half of 10th century B.C.

An Attic chalice krater with Telephus and Orestes by the Hector Painter, 4th decade of 5th century B.C.



A Columbian ritual vessel, gold alloy (tumbaga), Zenú culture, 9th - 15th century

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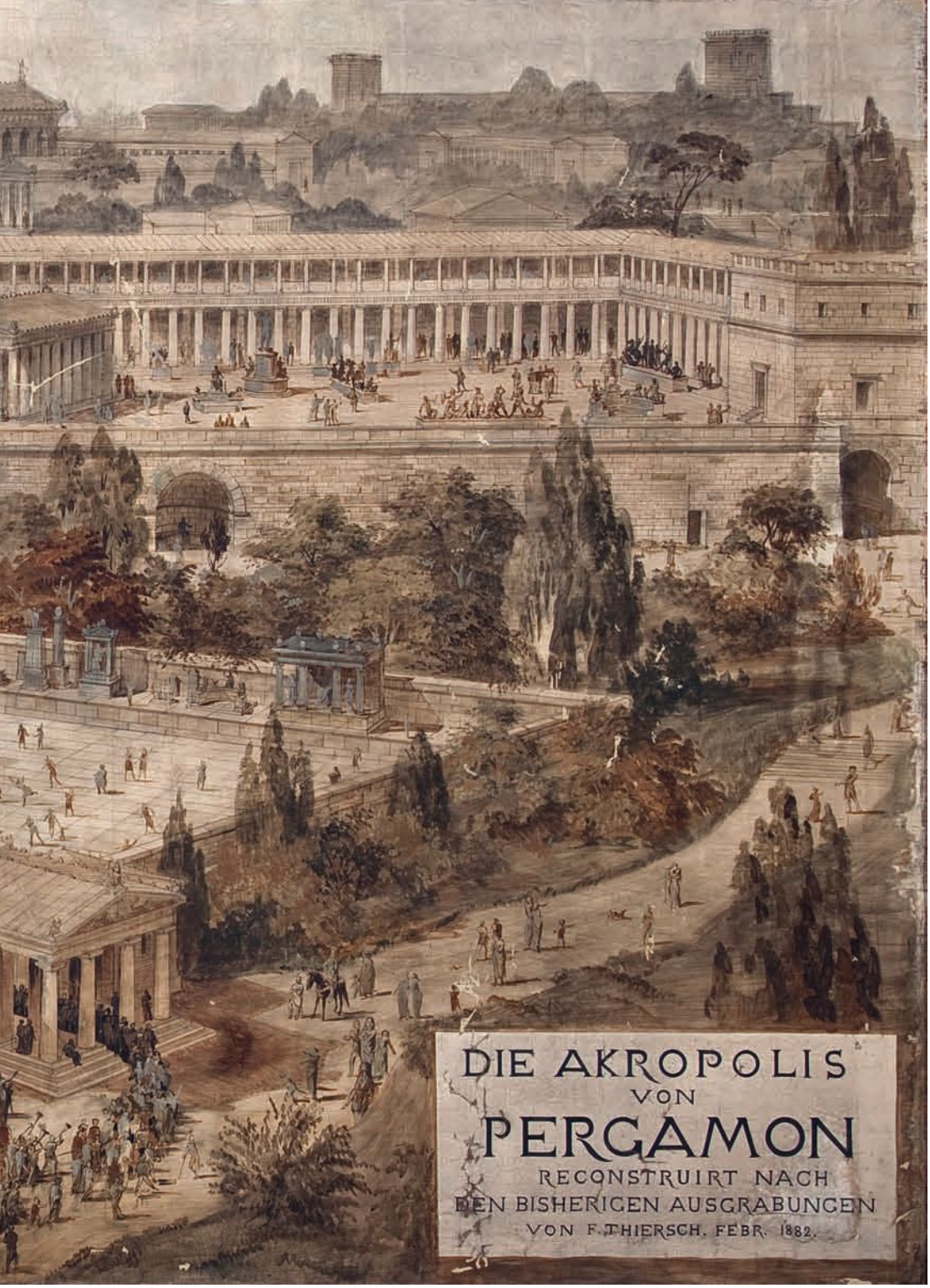
# The power of *Pergamon*

**Dominic Green** previews a fascinating show at the Metropolitan Museum of Art that tells the rich and culturally complex tale of one of the greatest cities of the ancient world




The military conquests of Alexander the Great and his successors not only subjugated nations but also generated cultural fusion. In the posthumous disintegration and division of Alexander's empire, a medley of Hellenistic kingdoms and empires fostered trade and communication from the Indus Valley to the Straits of Gibraltar. For three centuries, from Alexander's death in 323 BC to the demise of Cleopatra VII in 30 BC, the courts of the Hellenistic monarchs were centres of wealth, patronage and outstanding art. Their melding of Classical Greece and Near Eastern traditions brought about new standards in taste, new conventions in style – and new cultural institutions.

**1. *The Akropolis of Pergamon*, pen and ink with watercolour, by Friedrich (von) Thiersch, 1882. H. 198cm. W. 350cm. Antikensammlung, Staatliche Museen zu Berlin. © SMB/ Antikensammlung**

**2. Archaistic female figure, marble, Greek (Pergamene), Hellenistic period, 150-125 BC. H. 120cm. Antikensammlung, Staatliche Museen zu Berlin. © SMB/ Antikensammlung**

In *Pergamon and the Hellenistic Kingdoms of the Ancient World* (which opens at the Metropolitan Museum of Art on 18 April) more than 265 exquisite objects, all of which were created through the patronage of the Hellenistic courts, are gathered together to celebrate this cultural fusion and diversity. Many of the exhibits were created in Pergamon (near modern-day Bergama in western Turkey), seat of the Attalid dynasty and capital of its Anatolian rump state.

Curated by Carlos Picón and Sean Hemingway, this exhibition represents a historic collaboration between the Metropolitan Museum in New York and the Pergamon Museum in Berlin (which is currently undergoing refurbishment) whose celebrated sculptures form a third of the exhibits. Through these marble masterpieces, alongside jewellery, mosaics, cameos and coins, the exhibition shows the complex court culture of the Hellenistic kingdoms and traces its profound influence on Rome.

The show begins with Alexander and his court sculptor, the innovative and influential Lysippos, the only man permitted to create official portrait sculptures of the emperor. Nothing of Lysippos' work survives but we can see fine later copies, as well as Hellenistic sculptures bearing his influence. These include the largest single group of Hellenistic royal portrait sculptures to be excavated from a single site, the Villa dei Papiri in Herculaneum, which have never been shown in the United States before.

It was the Attalid dynasty that

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established itself at Pergamon in 282 BC, after the death of Alexander's general Lysimachus in the three-way Wars of the Diadochi, fought between the 'successors' of Alexander. A frieze on Pergamon's monumental altar depicts scenes from the life of Telephus, son of Herakles and Auge, the daughter of Aleus of Tegea, in order to associate the Attalids with the Olympian gods.

But the founding of the dynasty owed more to the heroic exertions of its founder, Philetaerus, an extremely cunning eunuch who fought for all three *diadochi* and then betrayed them all. Philetaerus began his career in the service of Antigonus in Phrygia, but switched to Lysimachus, ruler of Thrace, who appointed him governor of Pergamon and guardian of its treasury.

Then, in 282 BC, Philetaerus offered Pergamon to Lysimachus' enemy, Seleucus. Within a year, both Lysimachus and Seleucus were dead, leaving as Pergamon the nominal satrap of the Seleucid Empire, and Philetaerus wealthy enough to act independently. Eumenes I, his adopted nephew, succeeded


**3.** ***Fragmentary Colossal Head of a Youth,*** **marble, Greek, Hellenistic period, 2nd century BC. H. 58cm. Staatliche Museen zu Berlin. © SMB Antikensammlung.**

**4.** ***Rhyton*** **in the form of a centaur, silver with gilding, Greek (Seleucid), Hellenistic period,** ***circa*** **160 BC. H. 22cm. Kunsthistorisches Museum, Vienna.**

him in 259 BC, and soon demonstrated that he had similar talents. Intriguing with the Ptolemaic kings of Egypt, and pulling away from their Seleucid rivals, Eumenes I was soon able to mint his own coinage. In 238 BC, his heir and cousin, Attalus I, promoted himself from dynast to king and, bolstered by an alliance with Rome, expanded Pergamon's territory into the Anatolian hinterland. Pergamon's pedimented Altar, with its claim of exalted descent, probably dates from the reign of his son, Eumenes II (197-157 BC).

*Pergamon and the Hellenistic Kingdoms of the Ancient World* narrates the rise of the Attalids through sculptural reliefs from the Sanctuary of Athena at Pergamon. The rising power of the eunuch's heirs is symbolised by the spoils of war, by armour and weapons embellished with dynastic and

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religious symbolism, and by the sculptural elements of the Great Altar (excavated by Carl Humann between 1878 and 1886), which went on to exert a strong influence on European art. These include: figures from the roof; jewel-like architectural decorations from the inner open-air chamber; fragments from the massive Gigantomachy frieze, which runs along the Great Altar's base and depicts the battle of the Giants and the Olympian gods; and sections of the Telephos frieze, which once surrounded the fire altar inside the sanctuary.

The wealth and patronage of the Attalid kings fostered new institutions. Only Alexandria had a bigger library than Pergamon's; the word 'parchment' derives from the name of this city where, it is thought, it was first made. The collecting culture of the Hellenistic cities also fostered the related practices of connoisseurship and art history. Pergamon's culture was interdependent with its political authority: to champion Greek culture was to be championed by Greek culture. Pergamon's later kings studied in Athens, and expended much money in associating their kingdom with the city's gods and glory. First Eumenes II donated a *stoa* on the south slope of the acropolis, next to the Theatre of Dionysus. Then his brother and heir, Attalos II (159-138 BC), outdid him, donating the larger, now-restored, *stoa* in the Agora. The Attalids even rebuilt Pergamon's acropolis (**1**) to resemble that of Athens.

This exhibition's largest example of Pergamon's cultural orientation is a newly restored 13-foot statue of Athena, a one-third scale replica of the massive *Athena Parthenos* in Athens. Nearby, there is the *Apotheosis of Homer*, a marble relief by Archelaos of Priene, loaned by the British Museum. This juxtaposition is not without irony. The *Apotheosis* was probably made in Egypt in the 3rd century BC: the witnesses to Homer's promotion to the gods include a Ptolemaic king, suzerain of an empire from which the Attalids were to escape. And the *Apotheosis* was made to celebrate the winner of a public poetry competition, the kind of civic rite that, by deepening the particular identity of a Hellenistic *polis*, weakened its imperial loyalties. Beside these marbles, a papyrus fragment of *The Odyssey* reminds us that, while cultural authority is asserted in marble, its raw material is a more perishable stuff.

There is also a terracotta roundel of Menander (*circa* 342-290 BC), the comic playwright whose work triumphed eight times at the Lenaia festival at Athens. We can only guess whether his unsmiling aspect is that of the comedian at rest, or because the roundel is believed to have originally adorned a grave at Balıkesir, a city that the Attalids controlled at the height of their influence.

Further mystery attaches to a 2nd-century BC marble, the *Fragmentary Colossal Head of a Youth* (**3**), excavated from Pergamon's gymnasium. The head is powerful and beautiful – despite having been sliced diagonally – and may depict Alexander the Great.

The luxury of Hellenistic courts, and the refinement of their artisans, is visible in two loans from the Kunsthistorisches Museum in Vienna, and a third from the Benaki Museum in Athens. The *Vienna Cameo* (**6**), an early Ptolemaic production from the 270s BC, is made of Indian sardonyx – its

**5. *Mosaic Emblèma* with itinerant musicians, Roman, Late Republican period, 2nd-1st century BC. H. 48cm. W. 46cm. Museo Archeologico Nazionale, Naples.**

**6. The *Vienna Cameo*, 10-layered onyx (Indian sardonyx), Greek (Ptolemaic), Early Hellenistic period, 278-270/69 BC. H. 11.5cm. W. 10.2cm. Kunsthistorisches Museum, Vienna.**

delicate profiles develop into three dimensions in 10 layers of cream and chocolate stone. '*The art of cameo was invented in the Hellenistic period, and this piece is extraordinary and wonderfully observed*,' explains co-curator Sean Hemingway. '*It's the kind of object that would have been commissioned by royalty and given as a gift within the family, or to other royalty, or an important ambassador. It has a long provenance, going back to the 12th century, and it is in good condition. Christopher Lightfoot, our cameo and Roman specialist, suspects that it may have passed from antiquity to the present day without ever being buried*.'

**7. Pair of armbands with Triton and Tritoness, gold and silver, Greek, Hellenistic period, *circa* 200 BC. H. 25cm and 26.5cm. The Metropolitan Museum of Art, New York. © The Metropolitan Museum of Art, New York.**

The second loan from Vienna is a younger Seleucid work: a silver *rhyton* (a vessel used for the pouring of libations) dating from *circa* 160 BC (**4**). It is cast in the form of a superbly muscular, yet light-stepping, wild-haired centaur, poised with turned torso on a single hoof.

The Benaki Museum loan is a gold hair ornament from the 2nd century BC (**8**). A fine web of gold chains adorns a solid gold central plate flecked with red garnets, from which the goddess Athena leans out.

These stunning loans are accompanied by the luxurious paraphernalia of court life: exquisite


glasses and gold and silver vessels for rituals of banqueting and religion, coins with royal portraits, engraved gems and jewellery (7) from all over the Hellenistic world. They are juxtaposed alongside two 2nd-century BC figures: a bronze statuette of a veiled and masked dancer, from the Met's own holdings, and a beautifully finished, draped female marble figure from Berlin (2). This statue was made in the same century as the dancer, but in the Archaic style.

'*This piece is a decorative sculpture from one of the Hellenistic periods at Pergamon*,' Hemingway explains. '*It's a fascinating example of the decoration in royal apartments. In the Archaic and Classical periods, there was a single dominant style but, in the Hellenistic period, you find many styles being used contemporaneously. Pergamon is most famous for a baroque style, but this looks back to the Archaic. It might have been one of a group of dancers, or for a lamp in a decorated dining-room*.'

Pergamon is one of the best-preserved examples of a Hellenistic capital. It also has a long modern history as an archaeological site. Yet we cannot know what inspired, or obliged, the sculptor of this marble to draw on Archaic precedent. Perhaps he preferred to turn back to Greek glories than to look forward to Roman grandeur. A bronze portrait from Delos, known as the *Worried Man,* gives a hint as to the tenor of the times.

**8. Hair ornament with bust of Athena, gold, red garnets, blue enamel, Greek, Hellenistic period, 2nd century BC. D. 11.1cm. Benaki Museum, Athens.**

**9. *Sleeping Hermaphrodite,* marble, Roman, first half of the 2nd century AD, copy of a Greek original of the 2nd century BC. H. 25cm. L.148cm. Palazzo Massimo alle Terme, Rome.**

For a century after 229 BC, when the first Roman army crossed the Adriatic Sea, the Attalids rode the slowly rising tide of Roman power in the Eastern Mediterranean. But Attalos III Philometer, emulating the founder of his dynasty in legacy if not capacity, had produced no male heir when he died in 133 BC. His will left the Attalid kingdom to the Roman Republic.

The end of the kingdom was marked by a small revolt, led by Attalos III's understandably disappointed brother, Aristonicus, but the Romans brushed him off and set up their Asian capital at Pergamon, before moving on to even grander Ephesus. They did, though, beautify Pergamon after their fashion.

'*Pergamon is a case study in patronage in the Hellenistic kingdoms*,' Hemingway explains. '*In the last gallery, we look at how it became a centre for the art world in the late Hellenistic period, producing the kind of sculptures that interested the Romans*.'

Hadrian promoted the city to the rank of metropolis, and Pergamon bloomed accordingly. New temples, a stadium, a theatre and forum were constructed. Fresh sculptural types came into fashion, such as the Met's own *Sleeping Eros*, and another loan from Berlin, the monumental *Sleeping Hermaphrodite* (9). Viewed from behind, he/she sleeps comfortably; viewed from the front, he/she seems to have rolled over on to something sharp to the detriment of his capacity.

The magnificent *Borghese Crater* and the droll *Mosaic Emblèma* from Pompeii (5), depicting a group of musicians, represent the new decorative art that Greek sculptors created for Roman villas; Pergamon's mosaics were legendary. The old Greek shrine to Asclepius, the god of healing, was turned into a massive, luxurious spa, famous throughout the Roman world for its treatments, and remembered long afterwards as the birthplace of the ancient physician Galen in AD 130.

And the faces in the sculpture gallery change: Pompey, Cleopatra, Julius Caesar and Mithridates of Pergamon. The latter was not a king of Pergamon, but received his appellation because his father, Mithridates VI of Pontus, had sent him to school there; he went on to become a prominent citizen. Under Rome, Pergamon, like the other Hellenistic kingdoms, lost its power, but gained in cultural influence over the Roman world.

After this early imperial gallery, the exhibition ends with a graceful sculpture of Juba II, who was brought to Rome as an unwilling accessory to Caesar's triumph over Numidia and who was subsequently restored by Augustus as a client king.

'*This period has traditionally received less attention than it should*,' concludes Hemingway. '*It is a complicated period, and Pergamon is one of the best examples of a Hellenistic kingdom. Alexander's conquests exposed the Greeks and Greek artists to so many new cultures and styles, and added a tremendous amount of wealth, which really changed the ancient economy. There are a lot of resonances with our time and its institutions, like libraries and museums, and the building of incredible monuments. The art that came out of Alexander's conquests really changed the world*.' ■

**• *Pergamon and the Hellenistic Kingdoms of the Ancient World* is on show at the Metropolitan Museum of Art (www.metmuseum.org) from 18 April to 10 July 2016. The exhibition catalogue is available in hardback at $65/£40.**

1. Gertrude Bell standing outside one of her tents at Babylon in April 1909.

# *Queen* of the desert

Gertrude Bell's latest biographer **Lisa Cooper** pays tribute to the intrepid English traveller, writer, political officer and administrator whose love of archaeology led her to visit and document remote sites in the Middle and Near East

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**2. Bell's servant and cook, Fattuh (right) and an unidentified man near two human-headed, winged lion-centaurs that guarded Assurnasirpal II's throne-room at Nimrud, *circa* 883-859 BC. This site was destroyed by so-called Islamic State in April 2015.**

**3. Map showing the routes taken by Bell through the Middle East in 1909 and 1911. © Stephen Batiuk.**

'King-Maker', 'Nation-Builder', 'a female Lawrence of Arabia', 'Queen of the Desert' – these are some of the labels that have been attached to Gertrude Bell (1868-1928). The activities of this extraordinary Englishwoman in the Middle East have long been regarded with intense curiosity and now much controversy, especially in light of the continuing turmoil in modern Iraq and the much-debated wisdom of the West's interference in the affairs of that country.

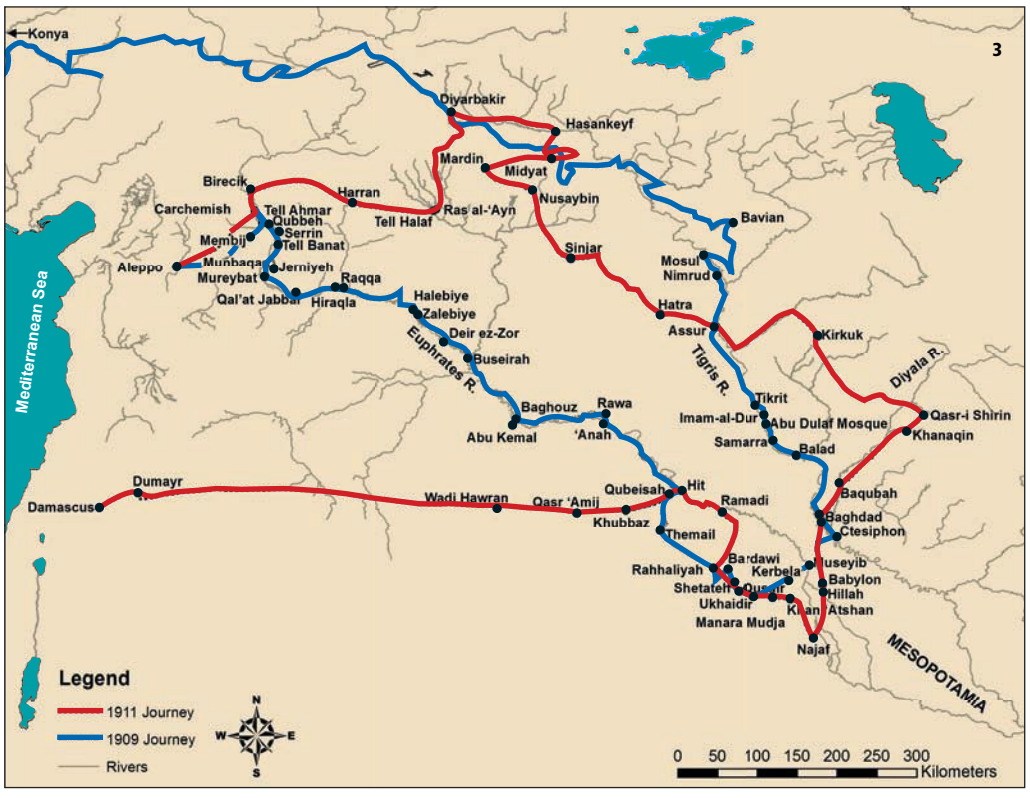
It was Bell who, as an officer of the British colonial administration in the years after the First World War, played a major part in the creation of modern Iraq. She took part in the 1919 Paris Peace talks, advised on the selection of Iraq's first king and helped to draw up the country's borders. Bell's special knowledge of the Middle East was in part the product of her extensive travels and enthusiastic exploration before the First World War.

Like her contemporary and friend TE Lawrence, her travels both proved her capacity for endurance and reflected her deep affinity with the people she encountered and the lands through which she passed.

Many recent biographies – and now a major film, *Queen of the Desert*, starring Nicole Kidman as Bell, to be released later this year – have capitalised on her remarkable character and the contrast between her shining professional accomplishments and her sad personal life, marked by tragic love-affairs, loneliness and depression that, ultimately, drove her to take her own life at the age of 58. Yet few of these accounts of Bell touch more than superficially on the aim that drove much of her interest in the Middle East in the first place: archaeology. It was her intense interest in these antique lands and her desire to find, map, describe and understand their rich civilisations that inspired her long, dangerous journeys.

Further, her achievements in the field of archaeology were significant; Bell published several learned articles and three books on the subject – which received praise from other European scholars working in the same field. It was Bell's prodigious archaeological achievements that eventually led, in 1922, to her appointment as Iraq's first honorary Director of Antiquities and spurred on her efforts to create the country's National Museum in Baghdad.

As a young woman, Gertrude Bell was captivated by the ancient cultures of Greece and Italy. Later, she became fascinated by the Middle East, where she often travelled as a lone Englishwoman accompanied only by local guides, baggage-handlers and her beloved Armenian cook, Fattuh. *The Desert and the*



*Sown*, Bell's travelogue of her journey through the Levant, published in 1905, reads as a charmingly perceptive account of the people and places she encountered, and the descriptions of the ancient sites and monuments she visited are recorded in considerable detail. Her penchant for archaeology and her growing expertise in describing the art and architecture of Late Antiquity is even more amply reflected in her next book, *The Thousand and One Churches*, co-authored with the esteemed archaeologist William Ramsay and published in 1909. In this, her report on the ruined Byzantine churches of Binbirkilise, near Konya in Turkey, secured her credentials not only as a serious scholar of antiquity but also showcased her skills as a perceptive photographer. This book is replete with her crisp, detailed images of the churches' architectural forms and carved decorations, set amid the rugged, mountainous landscape.

Gertrude Bell's first encounter with Mesopotamia (present-day Iraq) took place in 1909, when she embarked on an adventurous journey on horseback down the east bank of the River Euphrates, from Syria into the heart of Iraq, before journeying up to central Anatolia (now Turkey) by way of the Tigris river. She visited and documented many ancient monuments and sites, accumulating a wide knowledge of Mesopotamian history, from its earliest settlements to its later Islamic cities. A similar trip was undertaken in 1911, with additional excursions into the deserts of Iraq, and a memorable trip into Persia (Iran) to see the ruined site of Qasr-i-Shirin, with its crumbling palaces of presumed Sasanian date.

Bell was fortunate to have been present at the sites of Babylon and Assur in Iraq when German excavators were laying bare the spectacular remains of those ancient cities. They regaled her with stories about the tumultuous events and colourful individuals of the past, such as King Nebuchadnezzar and Alexander the Great. She was also hugely impressed by the meticulous manner in which the German archaeologists carried out their work. They traced each and every mud brick wall with care, and produced detailed architectural plans and reconstructions that brought the ancient palaces, temples and ziggurats back to life.

Bell's detailed diaries reflect her dogged determination to understand and record everything that she saw. The German excavators reported she was overwhelmingly eager, a visitor who questioned them about their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**4. More than 25m wide and 35m high, the enormous vault of the Sasanian palace at Ctesiphon is the largest unreinforced brick arch in the world.**

**5. The Great Mosque in Aleppo, Syria, was built in the early 8th century then restored many times. In the 11th century during the Seljuk period the exquisitely adorned stone minaret was added. It was brought down in an exchange of heavy weapons fire in 2013.**

**6. Gertrude Bell's camp in front of the ruins of the Roman-period Temple of the Great Iwans in Hatra, Iraq. Sculpture in Hatra has recently been seriously damaged by so-called Islamic State destroying pre-Islamic idols and 'false gods'.**

work relentlessly. '*She wanted to know absolutely everything and crept with me tirelessly into every hole and corner of the excavation*,' recalled Walter Andrae, the director of the excavations at the Assyrian city of Assur (*Bilder eines Ausgräbers. Die Orient-bilder von Walter Andrae 1898-1919/Sketches by an Excavator*, E Walter Andrae and RM Boehmer, from the English translation by Jane Moon, Berlin, 1992).

But Bell seems to have been less impressed by British archaeologists working at Carchemish on the Euphrates, which she visited in 1911, describing their more haphazard method of excavation as 'prehistoric'. Feeling defensive, the young TE Lawrence, who was working as an archaeologist on the British team there at the time, felt obliged to stem her criticism with a 'display of erudition'. He dazzled her with a whirlwind of varied topics – from ancient architecture, pottery and metalwork, to Arabic grammar, camel prices, telephoto lenses and the Young Turks movement. His charm offensive worked well as, by the end of the day, Bell had become much more respectful towards the archaeologists working there. Lawrence wrote in a letter: '*Gerty went back to her tents to sleep. She has been a success: and a brave one.*' (Letter to the archaeologist DG Hogarth, 21 May 1911, in *TE Lawrence: The Selected Letters*, edited by Malcolm Brown, New York, 1988.)

It is sad that both this and the past century has been so unkind to many of the ancient places that Bell visited and documented. They have fallen into ruin by neglect, or have been damaged, or eradicated by war and by wilful destruction. Astonishingly few of the beautiful early mosques and *khans* that Bell photographed in the old city of Aleppo survive today. Other victims of the on-going Syrian civil war include the tall, 11th-century Seljuk minaret of the Great Mosque, which was brought down in 2013 amid an exchange of heavy weapons fire. While, at the oasis city of Palmyra in the Syrian Desert, little now remains of its two precious temples and its iconic triumphal arch. In Iraq, the distinctive 12th-century octagonal brick minaret at 'Anah, which originally stood on an island in the Euphrates, was destroyed by a bomb during sectarian violence in 2006. The lovely 11th-century Shia mausoleum of Imam al-Dur, north of Samarra in central Iraq, whose distinctive lobed domes were topped by storks' nests in Bell's time, was deliberately blown up by the so-called Islamic State in October 2014. The same fate has befallen the 9th-century BC Assyrian palace of Assurnasirpal II in Nimrud, whose doors were once guarded by colossal, human-headed winged lion-centaurs; now it is a huge field of debris. Damage has been inflicted on the sculpture of the magnificent Roman site of Hatra.

With such tragic losses, it is indeed fortunate that we have the hundreds of detailed photographs that Gertrude Bell took of these ancient sites stored safely in an archive at the University of Newcastle; they act as valuable witnesses to a rich and varied ancient past.

The most important archaeological

**7. Bell's photograph of the Baghdad Gate of Raqqa, Syria, taken on her 1909 journey down the Euphrates. The gate stands at the south-eastern corner of the fortified enclosure of the 8th-century city of Rafiqa, built by the Abbasid caliph al-Mansur.**

**8. A 12th-century octagonal minaret on the island of 'Anah in the Euphrates river, present-day Iraq. The minaret was destroyed by a bomb in 2006.**

**9. The 11th-century Mausoleum of Imam al-Dur at the northern end of the Samarra ruin-field in central Iraq. When Bell photographed it, in April 1909, the distinctive lobed domes of the structure's roof were topped by several storks' nests. This lovely Shia structure was destroyed by so-called Islamic State in October 2014.**

**10. Colonnade in the precinct of the Temple of Bel at Palmyra, Syria, photographed by Bell in 1900. The central sanctuary of the Temple of Bel (top right) was dynamited by so-called Islamic State in August 2015.**

encounter for Bell was with the desert castle of Ukhaidir, located in the desert to the west of the Euphrates in southern Iraq. Determined to be the first to document it properly through detailed plans and numerous photographs, she spent several days at this magnificent, forgotten palace with its crumbling towers looming high over the surrounding desert wastes.

Subsequent study of her recorded data and research of comparable architectural constructions back at home, aided by correspondence with other European scholars of Late Antiquity and of Islamic art and architecture, led Bell to suggest that Ukhaidir was an 8th-century construction of the Islamic Abbasid Era. Her published report, *Palace and Mosque of Ukhaidir*, which appeared in 1914, is full of perceptive observations about the origins and evolution of certain architectural forms, such as the pitched brick vault, the cross-vault, dome and *iwan*, found there. These are placed within the wider context of developments in the Near East over its long architectural history. Above all, her research at Ukhaidir highlighted the distinctive blend of Near Eastern and Graeco-Roman traditions that came to characterise early Islamic art and architecture.

Gertrude Bell's ambitious *Palace and Mosque of Ukhaidir* represented the culmination of her efforts as a scholar of the past, but it was also to be her last real academic venture. The outbreak of the First World War transformed her life, propelling her to help with the war effort by joining the Red Cross and then, in late 1915, accepting an invitation to join the British Office of Military Intelligence in Cairo, soon to be renamed the Arab Bureau. Capitalising upon her expert knowledge of the lands and peoples of the Middle East, Bell's ability to analyse the power and politics of local Arab leaders, to evaluate their links to the Turkish enemy and to judge their potential loyalty to the British, was nothing short of a triumph. Her talents drove her onward to Mesopotamia where, appointed Oriental Secretary to the British High Commissioner, she acted as an indispensable advisor and policy-maker up to, and after, the creation of the British-mandated state of Iraq in 1922.

While this dramatic turn in the focus of her life led her further and further away from the scholarly pursuit of archaeology, her association with the past was never fully eclipsed and actually enjoyed a renaissance after Faisal, Iraq's first king, appointed her to become the head of Iraq's Department of Antiquities. In that capacity, Bell drew up laws governing how and where archaeological excavations should be conducted, and where and to whom and antiquities should be given and housed (at least half of all excavated objects were to be turned over to Iraq and housed in its museums). Although a far cry from the glamour and

**11. Bell's photograph of the site of Ukhaidir from the north-east. This would have been one of her first views of the site when she approached the castle in 1909. Her shadow appears in the lower right corner of the picture.**

**12. Bell records one of Ukhaidir's walls in her field notebook, in March 1909, while her travelling companions, with rifles slung over their shoulders, assist her by holding the measuring tape.**


excitement of creating and administering a new country, Bell dedicated considerable time and energy to describing and cataloguing a small assemblage of antiquities that would constitute the core collection of Iraq's first National Museum, which was officially opened in Baghdad in 1926.

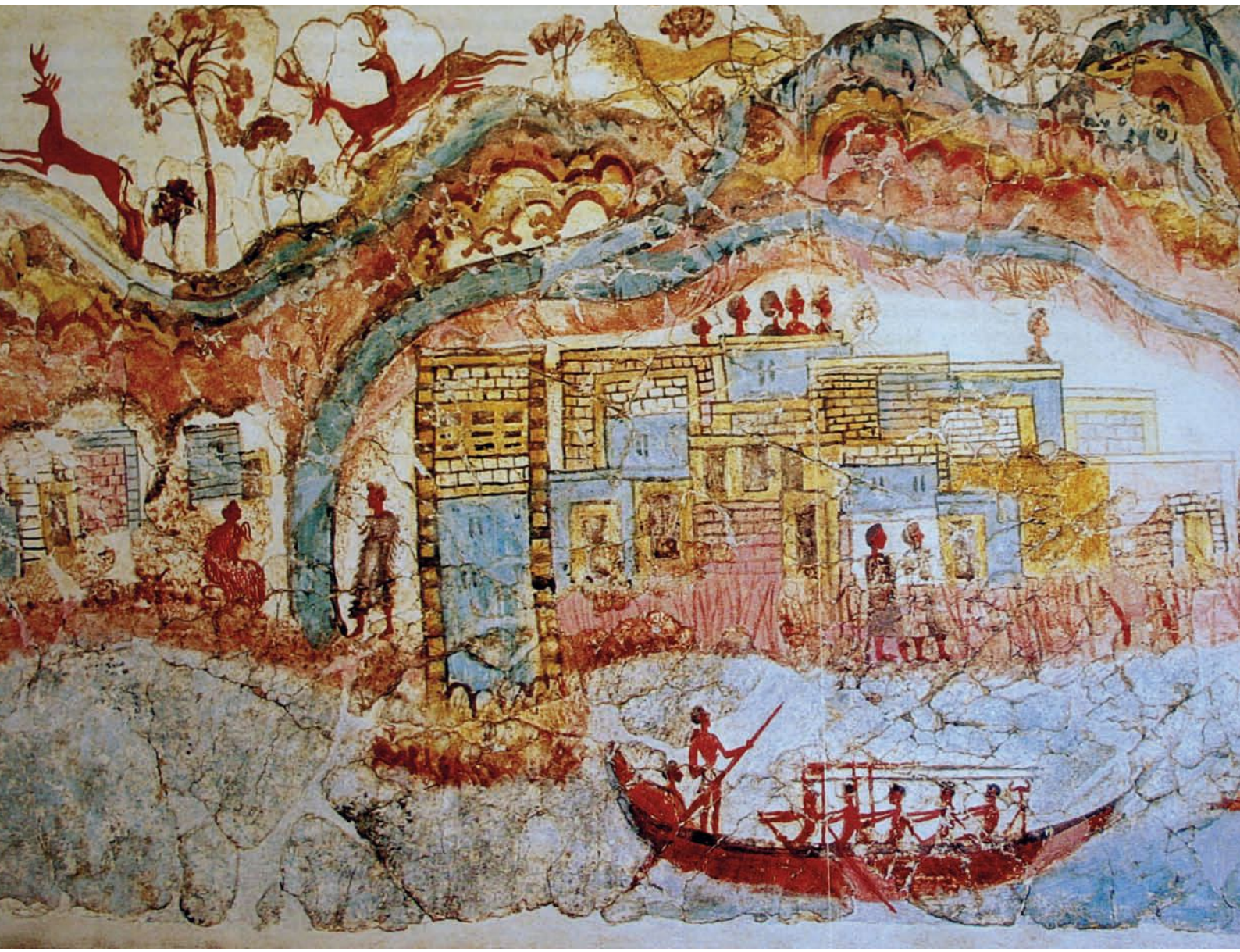
Sadly, both her achievements, the founding of the National Museum and the birth of the state of Iraq, have experienced tragedy in the recent past. The museum was heavily vandalised and looted during the 2003 invasion, since when the country has been in chaos. Yet Bell herself may not have been surprised by this unfortunate turn of events, which have undone much of what she strove to create. With her keen understanding of the past she was aware of the transitory nature of power and of her own short-lived contribution. Ever historically minded, she would recall the countless kings and conquerors who had passed through these lands enjoying brief moments of glory before they, in their turn, were overthrown. For all her ambitious schemes, both for the past and the future of the Middle East, Gertrude Bell understood all too well her own fleeting value in a world of endless change and turmoil. ■

• ***In Search of Kings and Conquerors: Gertrude Bell and the Archaeology of the Middle East*** **by Lisa Cooper is published in hardback by IB Tauris at £20.**

**13. Bell's photograph of the north-western interior corner of the blind arcaded Court of Honour of the castle of Ukhaidir. Tribesmen of the Zagarit, whom she met in 1911 during her visit, gather around one of her tents.**

**14. Gertrude Bell with Faisal, King of Iraq (second from the right), at a picnic at Ctesiphon in 1921, shortly after Faisal's coronation.**

**All images (except the map) courtesy of the Gertrude Bell Archive, Newcastle University.**



# Leading a life of *luxury*

**Dominic Green** reports on what the discovery of fragments of Aegean-style frescoes and an extensive wine cellar can tell us about life in the Bronze Age palace being excavated at the Tel Kabri site in the Galilee region of Israel

No ancient civilisation was an island – and certainly not the remarkably civilised Aegean islands of Minoan Crete and Thera (Santorini) during the Middle Bronze Age (*circa* 1900-1600 BC). The Minoans, as Thucydides wrote in the 5th century BC, thrived by *thalassocratia*, 'the power of the seas'. Yet we are less certain of how the Minoans used that power and of the relationship between economic exchanges and cultural influence. The search for a deeper understanding of the relationship between the Minoans and their Near Eastern neighbours has now directly led to a Canaanite palace at Tel Kabri in north-western Israel.

More than a century of excavations, notably by Sir Arthur Evans at Knossos, have demonstrated the wealth and artistic sophistication of Minoan civilisation. Textual evidence confirms the presence of Minoan traders on the Syro-Canaanite coast. An inventory from Mari in modern Syria, dating from the 18th century BC, describes an allocation of tin to an interpreter working for the chief Caphtorite (Cretan) merchant at the port of Ugarit. Yet until recently, little archaeological

**1. Aegean *Ship Procession* fresco from the West House, Akrotiri, late 17th-early 16th century BC. Photograph: courtesy of *Biblical Archaeology Review*.**

**2. Reconstructed fragment showing a bull-leaper, from Tell el-Dab'a, Egypt, *circa* 15th century BC. Photograph: courtesy of Manfred Bietak, Austrian Academy of Sciences.**

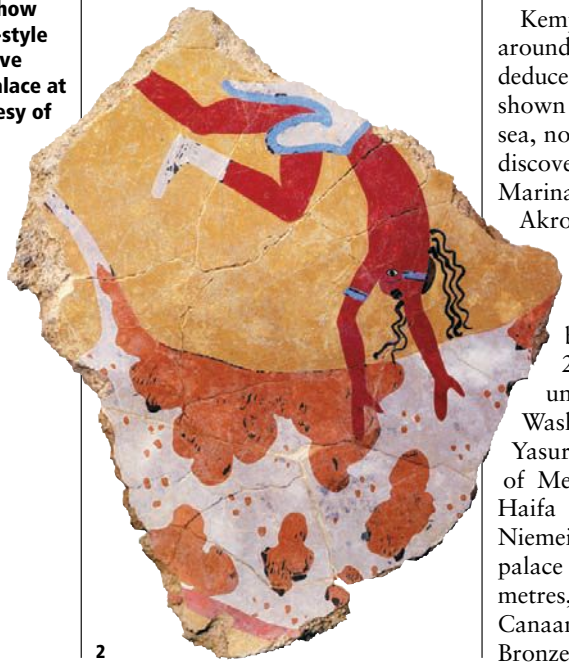
**3. Reconstruction of finds, *circa* 17th-16th century BC, to show how an Aegean-style fresco would have looked in the palace at Tel Kabri. Courtesy of Nurith Goshen.**

evidence could be found outside the Aegean Islands for the most familiar of Minoan exports, those instantly recognisable, colourful elegant frescoes from Knossos in Crete and Akrotiri on Thera.

The first sighting of Minoan imagery was a bull's horn and a possible double-axe, reconstructed by Sir Leonard Woolley from fragments discovered in 1937-39 and 1946-49 at Alalakh (Tell Atcharna), on the southern coast of modern Turkey. Woolley also confirmed Comte du Mesnil du Buisson's discovery in the 1920s of Aegean-style wall-paintings in imitation of marble at Qatna (Tell Mishrifeh), in modern Syria.

Half a century passed, however, before a series of remarkable discoveries confirmed a wider Minoan presence in the region. During the 1990s at Tell el-Dab'a in the Nile Delta, the Austrian archaeologist Manfred Bietak found Aegean-style fragments of a fresco depicting bull-leapers like those at Knossos, painted over a maze pattern evoking the myth of Theseus and the Minotaur. Then, between 2000 and 2004, Peter Pfälzer of Tübingen University uncovered more than 3000 fragments at Qatna, with running floral motifs and also dolphins familiar to us from the frescoes in the palace of Knossos.

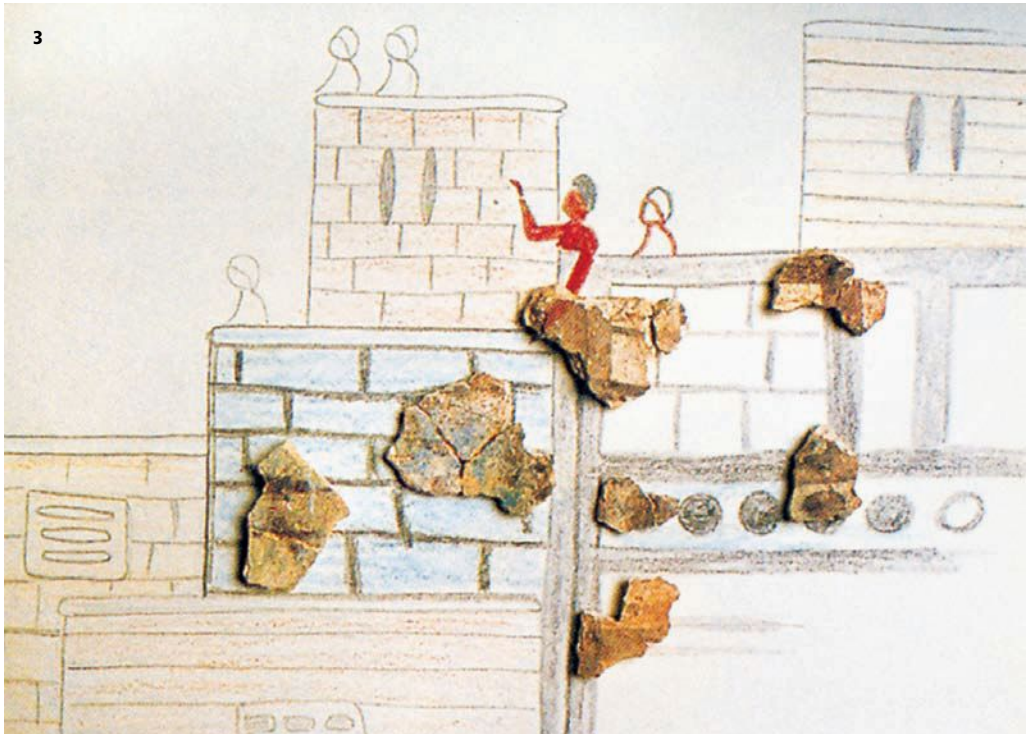
But earlier, back in 1986, Aharon Kempinski of Tel Aviv University and Wolf-Dietrich Niemeier of Heidelberg University had begun to excavate at Tel Kabri, five kilometres east of the Israeli coastal town of Nahariya. There, in 1989, they discovered a 'ceremonial hall' with an Aegean-style painted plaster floor. A grid of red lines formed a red-and-white chequerboard-style pattern with plants, such as irises and crocuses, depicted within its many squares. There were also marbling effects painted in red, brown, yellow and grey. These designs are similar to those found in Aegean palaces.



At the threshold between the hall and an adjoining room, several thousand fragments were packed together: the remains of a small wall fresco, which appears to have been removed and reused as material for later construction.

Kempinski and Niemeier retrieved around 2000 of these fragments and deduced that the fresco had once shown a landscape of hills and sea, not unlike the miniature fresco discovered in 1972 by Spyridon Marinatos at the West House at Akrotiri on Santorini.

These were significant discoveries, but Tel Kabri's extent and potential only became apparent after 2005, when digging resumed under Dr Eric Cline of George Washington University and Assaf Yasur-Landau, Associate Professor of Mediterranean Archaeology at Haifa University. Kempinski and Niemeier had estimated that the palace covered about 2000 square metres, a respectable size for a Canaanite palace of the Middle Bronze Age. But Tel Kabri turned



out to be much larger, and much richer in Minoan-linked findings.

'*We call it the palace that keeps on giving*,' says Cline. The 2005 excavation was followed by further digs in 2009, 2011 and 2015. '*Each time we think we've reached the limits of the palace, we turn out to hit another wall, and then the next room. First we went to 4000sqm, then to 6000sqm; now, we're thinking it's closer to 8000sqm. That makes it one of the largest Canaanite palaces around*.'

The sheer scale of Tel Kabri suggests that it must have had links with Hazor, the largest city in the Galilee region, and one of the largest in the Fertile Crescent. Tel Kabri's inhabitants would have been socially and economically influential in northwestern Galilee. The political structure of northern Canaan is on Cline and Yasur-Landau's research list.

**4. Aerial view of the site of the palace at Tel Kabri in 2011: the wine cellar is the dark area in the centre. Photograph: courtesy of Eric Cline.**

**5. Dr Eric Cline, Professor of Classics and Anthropolgy at the George Washington University, on site in Israel in 2013. Photograph: courtesy of Eric Cline.**

'*We want to investigate how a Canaanite palace formed and developed in this period, how it utilised the Mediterranean landscape to consolidate its economy, and what connections the palace had to other Mediterranean elites*,' Yasur-Landau explains.

The palace does not appear to have been built by an invader. '*We don't see any destruction, only construction*,' says Cline. He and Yasur-Landau may have identified the origins of at least one of the palace's builders. Towards the end of the Middle Bronze II period (*circa* 1600 BC), a large and expensive building was constructed abutting the palace's western wall. The new walls were lined with orthostat blocks, large slab-like stones measuring up to five feet in length. Each block was drilled with a square dowel hole, probably so that a wooden façade could be hung on the exterior of the wall, like a modern window blind. Cline and Yasur-Landau note the similarity between these blocks and those in the Minoan palaces at Phaistos and Malia in Crete.

'*It wasn't just the ceremonial hall that was painted*,' adds Cline. '*There were Aegean-style paintings scattered in several different areas of this Canaanite palace*.' As the dig expanded, fragments of another Aegean floor and fresco came to light. The second set of fragments was also painted in the Aegean style, in red, orange, yellow, brown, black, white and blue – this is the first time that blue paint from this period had been discovered in Israel.

Half a dozen of the fragments fitted together to depict part of a white animal, outlined in black against a blue background. Cline and Yasur-Landau interpret this partial image as a fish's fin or a griffin's wing. They suggest parallels between this figure and the flying fish fresco at Phylakopi on the Cycladic island of Milos, or the griffin from Mycenae.

The extent of the palace is still to be defined: the archaeologists have yet to locate its perimeter. Already, though, it has been established that the ancient 'wine cellar' – discovered in 2013 to the west of the palace's central courtyard – is the largest known in the Near East. '*When we found the original wine cellar in 2013,*' says Cline, '*we thought that we had 40 jars, each containing 50 litres. That's a substantial amount. In today's terms, 2000 litres would equate to about 3000 bottles*.'

Stored next to a ceremonial room suitable for staging banquets, this would have supported the household for a year. But further analysis soon

**6. Excavating the palace's extensive wine cellar, with its large amphorae, at Tel Kabri in 2013. Photograph: courtesy of Eric Cline.**

**7. Fragments of a mural from Mycenae showing a griffin on a characteristic blue background. Photograph: courtesy of National Archaeological Museum, Athens.**

expanded the economic significance of the cellar. '*It now turns out that we underestimated the capacity of the jars by half or more*,' reports Cline. '*Each jar will actually hold 113 litres. So instead of 2000 litres, we're now looking at more than 4000 litres, just in that one cellar. Then, in 2015, we found another three rooms, with another 70 jars and we suspect that there may be another row of storerooms, immediately to the west of these three rooms*.'

The volume of wine held in the cellars increases the likelihood that it was not only reserved for the ruler, his household and his guests, but that some of it could have been stored for commercial purposes. '*Maybe there was enough for them to be distributing it*,' opines Cline.

Wine was a staple of Bronze Age palace life, and viticulture was vital to the extra-palatial economy. Storage rooms are known to have existed at Mari in Mesopotamia, and large jars have also been found in the Aegean palaces at Knossos and Pylos in the Peloponnese. Cline and Yasur-Landau suspect that the palace and its estate played a role in the regional economy comparable to that of a Greek *oikos* (an Ancient Greek household unit).

The jars found at Tel Kabri were the first to have their contents empirically confirmed by Organic Residue Analysis. Testing conducted by Professor Andrew Koh at Brandeis University, near Boston, Massachusetts, revealed traces of honey, storax resin, terebinth resin, cedar oil, juniper and, perhaps mint, myrtle and cinnamon. These additives are attested in texts from 18th century BC found in Mari and the Ebers Papyrus (an Egyptian medical document concerning the use of herbs, dating from *circa* 1550 BC).

'*This wine may have been valued not just for its complex taste, but also for its fragrance*,' Yasur-Landau suggests. '*It included exotic scents like cedar oil and storax, which was also an ingredient of incense*.'

The wines, like the clay that made the jars, were a local vintage. Then, as now, the Upper Galilee was a wine-growing region. In the Zenon Archive from Ptolemaic Egypt, a papyrus dating from 257 BC refers to 80,000 vines on the Bethanath estate (near modern Karmiel), which was only 15km southeast of Tel Kabri. The animals consumed by the palace's inhabitants were similarly local. '*The palace elite hunted game such as aurochs* (wild cattle), *deer and wetland birds*,' says Yasur-Landau. '*These were eaten along with domesticated sheep and goats at large-scale banquets*.' The origins of the food and the scale of its consumption suggest that the palace was a large estate, with an extensive household.

The Zenon papyrus also mentions that wines from Bethanath grapes were purportedly indistinguishable from the celebrated wines of Chios. If Tel Kabri's wines were exported to compete with the best Aegean wines, that might explain an anomaly in jar capacity.

'*The type of jars that we found in 2015 were slightly different from the jars that we found in 2013*,' Cline says. '*We found two different sizes in the same location. One was the large 113-litre jar, and the other was smaller. Not much smaller: the small jars are around 80cm tall, as opposed to 100cm tall. But the small jars do seem more readily transportable. It's possible that the wine came into the palace in the small jars and was then decanted into the large jars, which stayed in place. It's also possible that the wine was decanted from the large jars, and exported in the small jars*.'

The interactions between Aegeans and Levantines must be framed by the wider context. Culturally, the traffic ran in both directions. In Ugaritic myth, Kothar wa-Khasis, the god of handicrafts, comes from

Caphtor (Crete) and the Aegean, to build a palace for the god Ba'al in the Levant. The later Minoans exported pottery, wine and food, and imported precious goods, such as ivory from Egypt and copper from Cyprus, for refinement in Crete. In Cretan myth, Europa, the mother of King Minos of Crete, is a noble Phoenician, abducted from the coast of Phoenicia by Zeus in the form of a white bull, and carried to Crete. Early Minoan art bears traces of Levantine and Egyptian influence, to the extent that Sir Leonard Woolley posited Levantine origins for Minoan culture.

The direction of wine exports does not dictate the movement of artistic styles. Nor does the direction in which artistic styles first travel dictate the subsequent movements of their practitioners. Radio carbon dating is crucial to our understanding of Tel Kabri's aesthetics. Testing suggests that the frescoes date to the 17th century BC. That makes the Tel Kabri frescoes much older than the Qatna frescoes, which date to the 14th century BC, slightly older than those at Tell el-Dab'a, and about the same age as the Alalakh frescoes. It also dates the frescoes to a period when Minoan civilisation was stable and affluent. This in turn supports hypotheses for the presence of skilled Aegean artisans in Canaan.

'*There was a destruction at Knossos, probably an earthquake, and usually dated to around 1700 BC*,' says Cline. '*But the Minoans picked up and carried on, until the Myceneans came in around 1350 BC. So we are looking into the gap between those two events. This is interesting, and complicating*.' There was also the eruption at Thera, around 1628 BC. '*It is certainly a possibility that our Minoans may have been fleeing the eruption*,' Cline allows.

**8. An aerial view of the expanded site of Tel Kabri in 2013 with the archaeologists spelling out its name. Photograph: courtesy of Eric Cline.**

**9. Excavated storage rooms of the palace with members of the team to show scale, 2013. Photograph: courtesy of Eric Cline.**

Yet, although the frescoes at Tel Kabri resemble those at Akrotiri, their artists might not have been refugees from the Cyclades, or even freelance itinerants, as Cline explains: '*They could also have been sent as a gift exchange. We have the Amarna Letters from the 14th century BC which describe craftsmen, artists, surgeons and sculptors being sent between royal courts*.' If this is true, the frescoes would have shown their owner's wealth and sophistication, and would also have indicated the kind of Mediterranean connections that a Canaanite king might have envied.

But a further mystery surrounds the fate of Tel Kabri's frescoes. Around 1500 BC, the palace fell from use, for reasons still to be ascertained but, curiously, the frescoes had already been taken down. This also happened at Alalakh and at Tell el-Dab'a. Only at Qatna were the frescoes still on the walls when the palace was destroyed. Why did Aegean-style wall-painting fall from favour, and why did the inhabitants bother to remove a fresco when it was cheaper and faster to whitewash over it? Further carbon-dating may give us answers to some of these questions.

Cline and Yasur-Landau are planning to accelerate excavations, with digs in 2017, 2018 and 2019.

'*We're really the only accessible Canaanite site for the Middle Bronze Age in the region*,' Cline says. '*There's almost nothing built on top of it. You start digging, and you're right there. This presents an opportunity unlike any other to really get to the heart of what it means to be Canaanite at this time*.'

And that, it appears, will also take us closer to the heart of what it meant to be Minoan in the Middle Bronze Age. ■

**• For further information about past and future digs at Tel Kabri visit www.digkabri2015.wordpress.com.**

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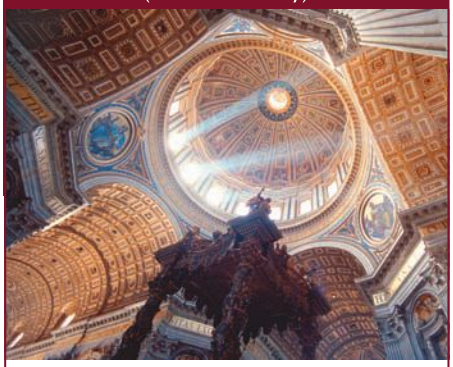

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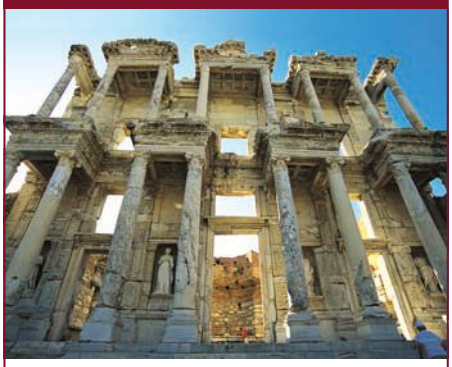

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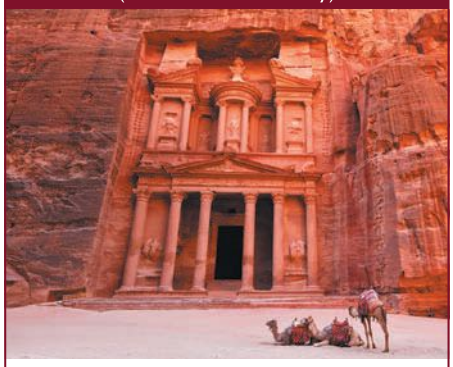

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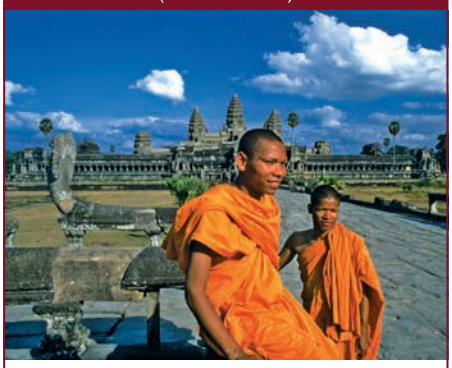

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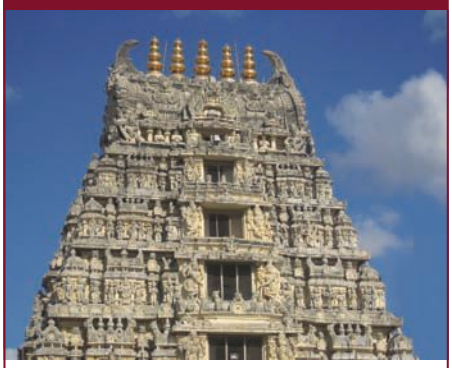

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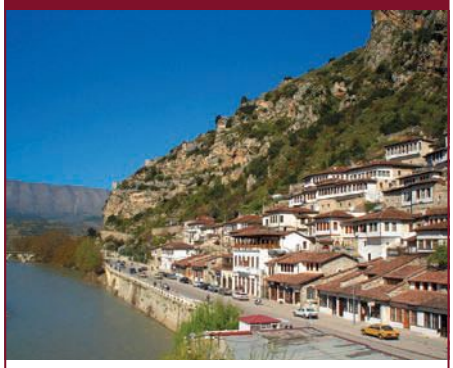

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# Underground Rome

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In case you are already thinking of catacombs – there is more to underground Rome than those intriguing labyrinthine tombs. Far less visited and of much greater artistic merit are the diverse and fascinating ancient sites recently excavated, restored and opened, or re-opened, to visitors; some of these important monuments have been closed to the public for many years.

A few, such as the Basilica at Porta Maggiore and the Mithraea, were always meant to remain secret, concealed below ground. Others were sophisticated masterpieces of engineering that served as substructures to support the colossal weight of great building complexes: the Baths of Caracalla, for example, and the

**Dalu Jones** explores some of the ancient subterranean sites of the Eternal City – and finds a hidden world opening up beneath her feet

1

2

**1. Virtual reconstruction in 3D showing the stairs leading to the first floor of a 2nd-4th century AD house in Domus Romane found below Palazzo Valentini. Photograph: Civita.**

**2. The virtual reconstruction shows a large room in a lavish house in the Domus. Photograph: Civita.**

**3. An exquisite mosaic floor, 2nd-3rd century AD, found in the Domus. Photograph: Civita.**

**4. A section of a rare marble floor, 2nd century AD, from the Domus Romane. Photograph: Civita.**

imperial palaces on the Palatine, are foremost among them.

The Domus Aurea, Emperor Nero's wondrous palace, on the other hand, will remain closed for restoration for many years to come. First, the gardens and ruins above it have to be reclaimed. This is to make sure no water will seep down and destroy the palace's superb surviving wall-paintings and stuccoes.

There are many houses of both rich and poor Romans buried under layers of Medieval, Renaissance and modern structures and a few, such as the Domus Romane under the Palazzo Valentini in the heart of Rome, are accessible. Here, visitors can take an fascinating underground tour of excavated houses, enhanced by 3D virtual images (**1** and **2**) that show what they would have looked like when, from the 1st to 4th centuries AD, they were above ground and were the homes of wealthy aristocratic families. The beautiful mosaic (**3**) and marble floors (**4**) attest to the level of luxury enjoyed by their owners.

It is a common, almost daily, occurrence that whenever road repairs are under way in Rome fresh archaeological discoveries are made. We are reminded of the harrowing scene in Federico Fellini's film *Roma* when an auger being used to bore a tunnel for a subway station reveals Roman frescoes that vanish before our eyes as the air and light rush in and destroy them.

Although that was fiction, it is not too far removed from fact, for Rome really does have a rich underground world and, when foundations are excavated, some new piece of the past comes to light. Now visitors can descend, go back through time and explore this maze

4

**5. A winged female figure carved in the stucco on the walls of the Basilica of Porta Maggiore, 1st century AD. Photograph: Archivio Soprintendenza Beni Archeologici, Rome.**

**6. A side aisle of the lofty Basilica of Porta Maggiore decorated with white stucco. Photograph: Archivio Soprintendenza Beni Archeologici, Rome.**

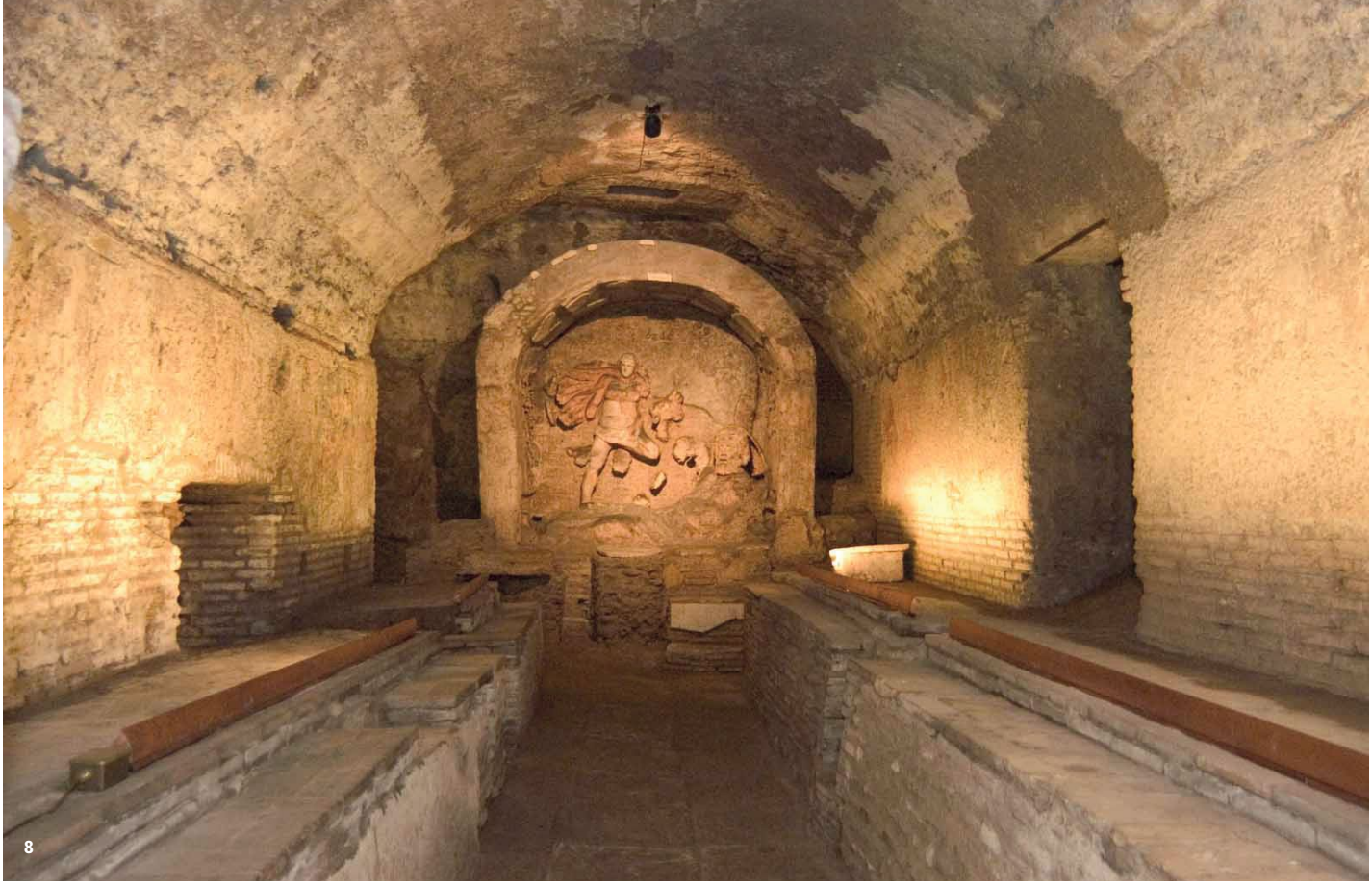
**7 A detail of the stucco decoration inside the 1st century underground Basilica of Porta Maggiore. Photograph: Archivio Soprintendenza Beni Archeologici, Rome.**

of archaeological sequences; they can witness the vastness and complexity of ancient Rome below ground as well as above. I was recently privileged to take just such an underground tour with archaeology superintendents from the Ministry of Culture, who guided me round some of the most dramatic of these newly opened sites, far from the madding crowds thronging the city's more obvious monuments above ground.

The 1st-century AD basilica near Porta Maggiore (**6**) was discovered in 1917 after one of the basilica's ceiling vaults collapsed during the construction of a railway viaduct from and through the Roma-Termini railway station and a tram-line running along the ancient via Prenestina. The rubble was cleared away and the basilica was found astonishingly intact after being sealed for almost 2000 years, only nine metres below street level.

A protective cement covering was built over it and restoration began. This was rendered difficult by seepage and the fragile quality of its elegant but delicate stucco reliefs. Restorers are still at work there, but this unique and mysterious monument is now finally open on a regular basis to small pre-booked groups of visitors.

A long, barrel-vaulted corridor led from the ancient Via Prenestina to the entrance of the basilica below ground. The square vestibule (measuring 3.6m x 3.6m) is decorated with wall paintings of stylised landscapes, birds and garlands in the lofty style adopted for the contemporary Domus Aurea. The basilica itself, is a rectangular space divided into three aisles by six pilasters supporting barrel vaults (12m x 9m). The floors are covered by black and white mosaics, while the walls and the ceiling are lined with white stuccoes (**7**) depicting mythological scenes on the theme of fate and the journey of the soul over the River Styx to the Island of the Blest. Female figures predominate (**5**) as well as representations of ritual objects: vases, candelabras and musical instruments. The wider central aisle terminates in a semi-circular apse that shows the poetess Sappho throwing herself off a cliff into the embrace of the sea goddess Leucothea, and a Triton, watched by Apollo and Phaon,



**8. The main hall of the 3rd century AD Mithraeum of Santa Prisca. Photograph: Archivio Soprintendenza Beni Archeologici, Rome.**

**9. Detail of the stucco relief showing Mithras and the bull behind a supine river god inside the Mithraeum of Santa Prisca. Photograph: Archivio Soprintendenza Beni Archeologici, Rome.**

the handsome young boatman who had rejected Sappho's love – a sort of apotheosis by baptism.

This subterranean basilica was built either as a family tomb and/or a secret meeting-place for Neo-Pythagorean adepts, who believed in reincarnation and the transmigration of souls. Here, they performed their esoteric rites and rituals – until they were banned in AD 50. It is likely that the basilica was the property of Rome's influential patrician Statilia family.

According to Tacitus (*Annals* XII.59.1), Titus Statilius Taurus IV killed himself in AD 53 after he was accused of practising '*magical and other superstitious practices*' by Julia Agrippina, Emperor Nero's mother (AD 15-59), three years after Neo-Pythagorean sects had been banned in Rome. But the basilica might also have been a funerary building for the first Titus Statilius Taurus, who was made a *consulus ordinarius* along with Octavian in 26 BC and, later, collaborated with Octavian when he became Emperor Augustus. Or it could have been the final resting-place of one or more of the wealthy female members of this family, who were also probably Pythagorean adepts.

Of the many other esoteric sects co-existing in ancient Rome, the cult of the Persian solar god Mithras was one of the more popular. Its rituals took place in an area called a Mithraeum, a sacred space open only to male initiates. Mithraism was a warrior's religion, imbued with astral symbolism, that centred on the sacrifice of a bull, which would guarantee the regeneration and salvation of its adherents.

Of the many surviving Mithraea in subterranean Rome, the best known and most visited lies beneath the church of San Clemente, a 12th-century basilica complex where layers reflect the cults and religions of successive centuries in the capital. Here, the 2nd-century AD Mithraeum is situated under several strata of buildings, including houses and streets dating from the 1st century AD, and a frescoed 5th-century church.

Equally dramatic – but far less well known – is the 3rd-century AD Mithraeum excavated below the 12th-century church of Santa Prisca (8). In the centre of the niche at the end of a long hall, visitors are confronted by a dramatic polychrome stucco sculpture of Mithras (9). With his cloak billowing out behind him, he holds a sacrificial bull. Before him, a bearded water divinity, possibly Oceanus, reclines. The side walls are decorated with a rare depiction of adepts in various stages of initiation.

The largest Mithraeum surviving in Rome was excavated below the ruins of the immense complex of public baths built by Emperor

Caracalla (r AD 198-217) in the last six years of his reign. It was inserted within a section of the network of galleries used for the provisioning of this huge building that could easily accommodate a staggering 6000 to 8000 people every day from noon till sunset, in a magnificent setting complete with statuary, gymnasia, a library and, of course, a number of cold and warm pools.

These galleries have, amazingly, survived intact and make up an utterly fascinating maze of veritable roads complete with roundabouts and service areas to allow the traffic of wagons pulled by horses and people. They are 6m high and 6m wide – almost the dimensions of a modern highway – and were used for the transportation of both wood for the furnaces to heat the water and food for those using the thermal baths. Beneath the many wood stores, furnaces, flour mills, cisterns, light and ventilation shafts, heating and hydraulic systems, there was an intricate, dense web of lead pipes supplying the water to fill, empty and clean the great pools and ornamental fountains. So efficient was this subterranean servicing that the baths were still functioning in the 5th century AD, more than 200 years after they had been built.

Visitors are now allowed inside the Mithraeum (**14**) and some of the impeccably restored galleries (**13**) where they can also admire outstanding artefacts found during more recent excavations. Among them are: the tall columns of grey granite of the same group that were re-used in prominent later buildings in the city, such as the church of Santa Maria in Trastevere; intricately carved, massive figured marble capitals that originally rested on porphyry columns; and a sort of 'unrolled' version of Trajan's Column, with marble slabs of historical reliefs showing Emperor Caracalla's military campaigns against northern barbarians.

The excavation of the Baths of Caracalla provided a treasure trove for Renaissance collectors such as Cardinal Alessandro Farnese (1520-89). Here, many masterpieces were found: the large-scale marble statue of Hercules, dating from the 3rd century AD, which came to light in 1546, and the Farnese Bull group, the largest single sculpture ever recovered from antiquity to date. Both are now displayed in the Archaeological Museum in Naples.

So many statues originally graced the magnificent baths, and even now more are being found during maintenance work. One, a beautiful headless statue of Artemis discovered in 1996, had been used as a wedge in one of the galleries. It is now on show in the National Museum in Rome.

But perhaps the most impressive of the newly opened underground archaeological sites in Rome is the 300-metre long, vaulted Imperial Ramp (**10**) that climbs from the

**10. The impressive Domitian Ramp, 1st century AD, from the landing between the first two ramps. Photograph: press.electamusei@mondadori.it.**

**11. Marble sculpture of Aesculapius with a small boy holding a sacrificial rooster, found during Giacomo Boni's excavation east of the sacred spring of *Lacus Juturna* in the Forum. H. 169cm. Photograph: press.electamusei@mondadori.it.**

Forum, up seven twisting slopes, to the top of the Palatine Hill, rising 35 metres, the height of a 10-floor building. Also known as the Domitian Ramp, it opened last October to mark the completion of the first phase of the ongoing reclamation of the substructures of the Palatine ruins and the reorganisation of the whole site. This majestic 1st-century ramp linked the imperial seat of power to the administrative and political hub of the city, proof, once again, of the sophisticated skills of Roman engineers who had to build a formidable multi-tiered galleried substructure to support the imperial palaces. Excavations in the area were begun by the Italian archaeologist Giacomo Boni (1859-1925) at the beginning of the 19th century, and some of the remarkable finds are on display in former service galleries under the Baths. Among them is a marble statue of Aesculapius (**11**), which is probably linked to the archaic cult of *Lacus Iuturnae* at the nearby healing spring of the water nymph Juturna.

The ramp was first cleared and restored after the demolition of the church of Santa Maria Liberatrice in 1900, which revealed the medieval and Roman substrata of this 16th-century church. A wide hall contemporary to the ramp, possibly a formal guardroom, was transformed in the early Middle Ages into the Oratory of the 40 Martyrs, dedicated to Roman soldiers shown in 8th-9th-century wall-painting (**12**) being left to freeze to death for their Christian beliefs in an icy lake in Armenia in AD 303.

As work continues over the next three years, it is envisaged that new routes (above and below ground) through the Palatine ruins and its park will take visitors to a much needed bar and restaurant (none are available today) in the Museo Palatino. With their spectacular views of the surrounding ruins and the city in the distance, these are bound to be popular with visitors. ■

**12. Wall painting in the apse of the Oratory of the 40 Martyrs, 8th-9th centuries. It shows the martyrdom of Christian soldiers in an icy lake in AD 303. Photograph: press.electamusei@mondadori.it.**

**13. The Antiquarium, a new display, in the service galleries under the Baths of Caracalla, built in AD 211-216. Photograph: ©arch. Fabio Fornasari.**

**14. Mithraeum inside the Baths of Caracalla, 3rd century AD. Photograph: Archivio Soprintendenza Beni Archeologici, Rome.**

**• The Domus Romane at Palazzo Valentini is open every day except Tuesday (www.palazzovalentini.it).**
**• The Basilica di Porta Maggiore and the Mithraeum at Santa Prisca are open by appointment only.**
**• The Imperial Ramp and the Baths of Caracalla (the Mithraeum by appointment) are open daily (visit www.coopculture and www.archeoroma.beniculturali.it).**

# A must for Late Bronze Age fans

1

David Gibson, Archaeological Manager of Cambridge Archaeological Unit, explains to **Diana Bentley** why Must Farm site is such an extremely important and exciting discovery

Few archaeological discoveries of recent times have created so much excitement in the press as the finding of the Must Farm Timber Platform, a superb Late Bronze Age site in Cambridgeshire. From the earliest exploration of the site by the Cambridge Archaeological Unit (CAU), which is part of the Division of Archaeology of the University of Cambridge, it was clear that this was an exceptional find. Here were the remains of a complete Late Bronze Age settlement that had come to a dramatic end, leaving behind a vast array of objects from everyday life, the quality and quantity of which has been astounding. For David Gibson, Archaeological Manager of the Cambridge Archaeological Unit, it is the discovery of a lifetime: '*The extent of the finds here has blown me away. We've known about the potential of this site for about 15 years but only started excavating in earnest in August 2015 and had no idea what our work would lead to.*'

Gibson's job is a demanding one. At the moment there are 14 archaeologists working on site and years of work lie ahead, which will entail marshalling the support of many experts to preserve and analyse the treasure-trove of finds. But Gibson tells me that he is relishing the task: '*Archaeology doesn't get any better than this*,' he declares.

**1, David Gibson, Archaeological Manager of Cambridge Archaeological Unit and the Project Leader at the Must Farm site.**

**2. Three glass beads excavated at the site have been analysed and found to have links to the Balkans.**

***How did you get into archaeology?***

While I was at school I joined a two-week dig in Lincoln for work experience. There was the supervising archaeologist, someone from the government youth training scheme, two gold smugglers on day release from Lincoln prison, and me! From the moment I stepped on site I thought it was all fantastic: the camaraderie, the teamwork – and, on the first day, I found a silver coin. From then on, I was hooked and I went on to study archaeology at Newcastle University. While I was there I got a grant from the Prehistoric Society to explore the archaeology of Normandy. Following that, I worked every summer holiday on prehistoric sites in France with Dr Ian Kinnes, who was then at the British Museum. This period of archaeology really gripped me. Since there are no written records from the era, you have to work out how life was lived then, through the artefacts and objects of the time, which I loved. I also found right from the start that you meet a broad array of people through archaeology.

The CAU has worked all over the world. One project involved us helping the Gurung people, one of

2

**3. Overview of the site showing the timbers of the collapsed Bronze Age roundhouse's roof.**

**4. Late Iron Age baldric ring with La Tène style decoration, probably part of a shoulder belt for carrying a sword. D. 37mm.**

**5. A complete pot found in settlement debris at the site.**

the tribes who make up the ranks of the Gurkhas in the British army, trace their history in the Himalayas. We did this by following their old migration routes from the oral histories. On projects such as this you meet everyone from leading academics in their fields to the local people – there's nothing like it.

***How was the settlement at the Must Farm site first discovered?***

In this region water levels rose during the Iron Age so settlements became submerged and peat formed. From medieval times onwards the Fens were drained – but the main drainage took place after the 17th century when the Dutch engineers arrived and reclaimed the land for farming.

The trouble is that the archaeological remains from Prehistoric times are up to two metres underground – you can't find them by geophysical surveys, aerial photos or fieldwalking. So, although chance finds from prehistoric times have come to light in the Fens over the last few hundred years, you really need some kind of intervention in the ground to locate them – like road-building or, in this case, quarrying.

The Must Farm clay quarry opened in the 1960s and was closed in the 1970s. When it was decided to reactivate it in 2004 an archaeo logical assessment of the site had to be done as part of the planning permission process. Martin Redding, a local man with a keen eye, had spotted an old post on the side of a pit some time before and remembered it. It was this that got us started. When we sent the post off for analysis and it was found that it dated from the Bronze Age we were excited.

In 2005 we did a site evaluation and the following year we opened a test trench. We found wonderful Bronze Age remains immediately. A large number of substantial timber piles were uncovered and, as we worked, it became clear that they had been part of buildings.

Last year it was decided that the whole site needed to be excavated rather than preserved *in situ* as the archaeology could slowly degrade. Historic England and Forterra, the owners of the site, provided the funding. Happily, this quarry has provided a window into an ancient landscape once hidden from view.

***What is the timespan of the Bronze Age in Britain and where does the Must Farm settlement fit into it? Was it part of a much larger social or trading network?***

The Bronze Age runs from approximately 2500 BC to 800 BC. At this site we are looking at the Late Bronze Age, about 1000-800 BC. We used dendrochronology [dating through the analysis of tree-rings] on the timbers to establish their age. To date we have excavated two houses but we think there may have been about six. So this was a small hamlet where around 30 to 70 people lived and which would have been part of a large social

network. The houses were built on stilts over a river, which was the motorway of the time. The large timbers used for the houses would have been floated down to Must Farm. The Flag Fen site, where there are the remains of a wooden platform and causeway, is less than a mile away.

In our previous excavation of the quarry in 2011 we recovered the remains of nine Bronze Age log boats. The fineware pottery from here has links to northern France, one metal object may be from Spain and the chemical analysis of the glass beads we found show that they came from the Balkans.

Three earlier North Ferriby Boats [found on the Humber foreshore and dated between 2030 and 1720 BC] were capable of going to sea and indicate communication links with the Continent.

***The Must Farm site is one of the best preserved Late Bronze Age sites in Britain but why has it been compared to Pompeii?***

The end of the Must Farm settlement was catastrophic. Fire consumed the timber houses built over the river. The house structures collapsed into the water below and settled into the soft silt of the riverbed. The objects used in everyday life in the houses were lost with them. We have now recovered many of these things and this is what makes the site so extraordinary. Often on Bronze Age dry land sites you only find a few broken pieces of pottery but here, due to the settlement's dramatic end, we have excavated everything from pottery to weapons to tools – and even fish traps. I think people have compared Must Farm to Pompeii because, although it's not on the same scale, it is a site preserved in one moment in time. When the fire struck, everything was abandoned, fell into the river and the inhabitants couldn't recover what they had lost.

**6. Late Bronze Age house stilts and roof timbers excavated at Must Farm site.**

**7. A Late Bronze Age 'poppyhead' cup. H. 60mm. D. 64mm.**

**8. Late Bronze Age bronze sickle. L. 130mm. Cutting edge 105mm.**

**9. David Gibson, Archaeological Manager of CAU and Mark Knight, Site Director at Must Farm.**

***Can you tell us about the range of finds from the site and why they are so exciting?***

If we compare the finds from Must Farm to those of other Bronze Age sites in the British Isles we can say that they are unique because they present the full spectrum of domestic life in Late Bronze Age Britain. The coming of the Bronze Age signalled a major change in human development. This new material enabled people to make different kinds of artefacts and allowed the decorative arts to flourish – and all of this is in evidence on the site. We have chisels of bronze, and spearheads that show an amazing degree of craftsmanship and control over the firing process.

Some 29 pottery vessels, from little beakers to drinking cups to large storage jars, were found in one house alone. This is fantastic. We even found food in the pottery bowls – and, in one pot, a spoon was still stuck into the food. We have also discovered the remains of weapons and a full range of domestic bronze tools – from tweezers to a bobbin with thread in it, from chisels to sickles for harvesting.

So far, though, we have only found one human skull – and it hasn't been dated yet. Lots of textile fragments have also been discovered. From them we should be able to establish what sort of garments they were part of, what colour they were and how they were decorated. They were not just plain textiles – some have the remains of tassels and knots along the edges and display a level of craftsmanship that is unusual for Britain. The textiles are made from the bast beneath the bark of lime trees.

***What was it like to live in the Must Farm settlement and how will this site add to our knowledge of life during the Bronze Age?***

The inhabitants of the settlement lived above the river and used a wide range of domestic goods. Since we have found the remains of nine boats nearby we know that this was an active, mobile community and the river would have been used as

a highway. The remains of cattle, sheep and pigs have been found, so the inhabitants had access to land resources, too. And we have discovered eel and fish traps made from woven willow. An eel fisherman who visited us told us that he uses similar traps today.

Once we analyse the pottery we may even find out what kind of food was in the pots and what recipes were used. What's very exciting is that this gets us away from the kind of Bronze Age archaeology that concentrates on important people buried in barrows. Before this, we have only had bits and pieces of domestic life from different sites. This site will give us a complete picture of life in the Late Bronze Age.

On the Continent, too, there is evidence of people who lived in wet environments. The remains of lakeside settlements in Switzerland, Italy and Germany have been explored over the years. The sites most comparable to this site, however, are in central Europe and Friesland in the Netherlands. Some, however, are later than this one and date from the Early Iron Age. Not many of them compare to the Must Farm site.

***What are your top three Bronze Age sites in the British Isles and why?***

I would pick the Great Orme Copper Mines, near Llandudno in North Wales, which were discovered in 1987. There are about five miles of prehistoric tunnels there that date back to 2000 BC. Copper, of course, is a key component of bronze and you can see how it was mined. Then there are the three, wonderfully preserved Bronze Age burial mounds at Clava Cairns, near Inverness, dating from about 2000 BC. The people buried there were greatly valued. Then there's the British Museum. As a child I loved wandering around its galleries. It has a worldwide collection of Bronze Age artefacts – from buildings and statues to everyday objects.

***What work is there still to do on the Must Farm site and its finds?***

We will be on site for several months more – we have really only uncovered the tip of the iceberg. There are several years of analysis to do – applying 21st-century technology to this great resource that we have found. The main structural timbers will go to Flag Fen for preservation. You can see the different components of the houses that we have never been able to see before on any Bronze Age site. We are hoping that we might find the remains of furniture, too. We are starting the analysis of the domestic objects found, which should provide us with much more information on how the settlement's inhabitants lived. To study all this we need to use quite an array of specialists. We will examine the wood and textiles in our Cambridge laboratories. Some food remains will be analysed at the University of York. The fire investigation will be undertaken by the University of Cranfield in Bedfordshire. There is a specialist there who will probably be able to tell us how the fire took hold just by examining the fire patterns on the wood. He is very excited about the project. We will also create a 3D model of the settlement and get some displays together over the coming years.

What's great about this discovery is also the level of public excitement it has caused. Our Facebook page and Twitter account had 250,000 views before Press Day and we have had #BronzeAge trending on Twitter. A story about the site on NPR radio in the United States attracted 30 million listeners – for an archaeological subject that is an unbelievable number.

The Cambridgeshire wetlands may appear to be a flat landscape with a big sky but what lies underneath the ground here is just amazing – I think this will be the most exciting discovery of my life. ■

**10. Detail of the decorated side of a 6.3-metre-long oak logboat found in 2011.**

**11. Late Bronze Age textile made from knotted plant fibres.**

**12. Bronze spearhead. L. 140mm, with a 100mm edge.**

**All photographs are © Cambridge Archaeological Unit.**

**• For further information and updates visit www.mustfarm.com.**

PATRICK CABROL / CENTRE DE PRÉHISTOIRE DU PECH MERLE / AKG-IMAGES

PATRICK CABROL / CENTRE DE PRÉHISTOIRE DU PECH MERLE / AKG-IMAGES

**Lindsay Fulcher** marvels at the beauty and skill so clearly evident in the cave art and rock sculpture she finds in the Dordogne and Lot regions of France

# *The genius in the cave*

Painted on the cave wall in front of me are two magnificent spotted horses. Their heads are small, their manes short and bristly. Facing in opposite directions, they are painted with such deftness and spirit and look so lively that I half expect them to gallop off in opposite directions. Around them are the outlines of stencilled hands. There is something moving about these images, especially when I hear when they were made. Around 25,000 years ago the artist stood with a raised hand, he put it against the wall of the cave and sprayed paint around it – and the shape was imprinted forever.

**1. Close-up of one of several 25,000-year-old hand stencils inside Pech Merle.**

**2. Two plump spotted ponies on the walls of the cave of Pech Merle. One of the few painted prehistoric caves in France still open to the public, it is close to the village of Cabrerets in the Lot.**

Well, not quite forever perhaps, but it is still here today in the cave of Pech Merle, close to the village of Cabrerets in the Lot Valley. This is one of the few painted prehistoric caves in France still open to the public. There are a dozen or so others close by but visitors are not allowed in to see their paintings – and with good reason given the alarming experience at Lascaux.

Most people remember the story of the chance discovery of the glorious 17,300-year-old animal paintings in the vast rocky chambers of Lascaux by two boys and a dog in 1940. Not for nothing was it dubbed 'The Sistine Chapel of Prehistory' and soon 1200 people a day flocked to see its paintings, bringing with them heat, humidity, carbon dioxide and bacteria – with the result that lichen began to grow on the cave walls and to destroy the images. So, in 1963, Lascaux had to be closed to the public but, even then, the threat to these Palaeolithic mastepieces did not abate, for a kind of fungus appeared in 1998, followed by a pernicious white, then black, mould, 10 years later. After this even scientists were barred from entering the cave – except for one who monitors the climatic conditions therein.

But the public clamoured to see the paintings and, in 1983, an accurate replica, Lascaux 2, that

reproduced 90 percent of the paintings in the Hall of the Bulls and the Painted Gallery, opened. To date it has received around 10 million visitors. Lascaux 4, a complete and even more minutely accurate replica, will open later this year.

But here, in Pech Merle, we are lucky enough to gaze upon the real thing. Like Lascaux, this beautifully painted cave was discovered by two boys but 18 years earlier. It opened to the public in 1926. Today the numbers of daily visitors are controlled and prebooking is required. This is the last painted cave we see in a week of gazing at an amazingly life-like painted, engraved and sculpted menagerie. We have seen images of huge shaggy mammoths lumbering along, pretty trotting ponies, mighty bison, great horned cattle, or aurochs, extinct deer, graceful ibex, the odd rhinoceros, cave bear and cave lion, even a fish and the occcasional man or two.

**3. A panorama at Le Thot shows a cave wall being painted; for a ceiling, scaffolding sometimes had to be used. The artist's only source of light came from tallow lamps or from torches.**

Based in Les Eyzies, which is aptly known as the 'Capital of Prehistory', each day we have driven out a short distance to visit caves and rock shelters, the 'art galleries' of our distant ancestors. There, local guides, experts in their fields, have shown us what we might have missed in dark underground recesses, pointed out how the artists have cunningly used the natural shape of the rock to give the animals a 3-D look, told us how the cave or rock shelter was discovered, and painted a picture of what the local landscape would have looked like 12,000 to 45,000 years ago.

But we still have many questions about the art: not least, who did it, how did they do it and, most perplexing of all, why did they do it? So it is lucky that we have Dr Iain Morley of Oxford University as our tour guide. Iain's particular field of research is the Palaeolithic archaeology and evolutionary origins of musical, ritual and religious behaviours and he has excavated at prehistoric and Classical sites in Britain, Italy, Greece, Croatia, Czechia and Libya. So he is more than well equipped to broaden our knowledge of what life was like in the Vézère and Lot valleys.

But our guide for Bernifal, the first cave we see, is its sprightly 90-year-old owner. Bernifal has no artificial lighting so we are all given torches, which we are only allowed to use when Monsieur Pemendrant gives us permission to do so. He uses his torch to illuminate the engraved images of mammoths and the mysterious tectiform symbols (which, some think, signify tents or houses). Here, we see our first hand stencil image made by spraying, or spitting, paint around a hand placed against the rock. Stone tools found in Bernifal are now in the National Museum of Prehistory in Les Eyzies.

A short distance away is Cap Blanc, an *abri* or rock shelter, where a sculpted frieze of horses, bison and deer parade before us. Traces of pigment on the rock suggest that these reliefs were once painted in bright colours that would have

4

LASCAUX À PARIS ©JM

been clearly visible from the valley below. Iain tells us that there was once probably a large amount of Palaeolithic open-air rock art but much of it has now been lost to erosion by wind and rain, whereas, being better protected, much more cave art has survived. A unique feature of Cap Blanc is that a woman, between 20 and 35 years old, was buried there in front of the frieze. Since she seems to have had better developed muscles on her left side and the sculpture also has a left-handed bias, she may be the artist. We will never know for sure.

Some caves are so long that to visit them you have to travel on a small railway. This is true of Rouffignac, whose galleries stretch for more than five miles. Famed for its many depictions of mammoths, it is one of the few decorated caves that was not discovered in the 20th century but which has been known and visited for centuries. An incised image of a great male mammoth, known as 'The Patriarch', clearly shows his tusks, hump and long fur. Horses, bison, woolly rhinos and ibex are also depicted, as well as tectiform symbols. The Grand Ceiling of Rouffignac shows a spectacular array of overlapping drawings of all manner of creatures. All the images here are monochrome and were made using the natural pigment black manganese oxide.

Another striking feature of Rouffignac is the clear evidence that this complex was home (at least in winter) to cave bears. Their scratches


5

LASCAUX À PARIS ©JM

**4. and 5. Two of the replica painted cave chambers in the touring exhibition Lascaux 3. Both the replicas, Lascaux 2 and 3, display the glory of the original cave's colourful cavalcade of painted animals. The cave itself was closed in 1963 when, due to high visitor numbers, lichen appeared on the cave walls and began to destroy Lascaux's priceless prehistoric art. Lascaux 4 will open later this year.**

graffiti the cave's wall and there are numerous large circular hollows in the softer sediments at floor level where the bears, like dogs, went round and round before settling down to sleep for hibernation.

Although Lascaux 2 is a replica, the paintings are overwhelmingly beautiful: the colours, the movement of this Palaeolithic pageant present a true carnival of the animals. Most of us can only imagine what the original is like but, with Lascaux 4 opening this year, we will soon have an even clearer idea.

At nearby Le Thot (an interpretation centre for prehistory) we meet modern descendants of some of the animals pictured in the caves. We don't see any woolly mammoths or cave bears or lions, of course – apart from when we are standing in front of a trio of screens that project creatures of augmented reality towards us – but outside in grassy paddocks there are real bison, Tarpan and Przewalski horses, deer, mountain goats and cattle that have been bred to resemble aurochs.

Just outside Les Eyzies is Font-de-Gaume, the only painted cave in France with polychrome paintings (many colours in each image) that is open to the public. Set high up above the valley of the Beune River, this T-shaped cave features

230 engraved and painted images of bison, horses, mammoths, goats, reindeer, aurochs, deer, rhinceros, big cats, a wolf and a bear. There are also four hand stencils, a rare human being and two vulvas sculpted on to the rock wall.

At La Ferrassie, another rock shelter on our itinerary, some of the earliest Palaeolithic art was discovered, including two more disembodied vulvas. The local guide tells us that when a group of gynaecologists happened to be visiting the site they opined that one belonged to a young girl and the other to an older woman who had had chidren.

Our first port of call the next day is the giant *abri*, or rock shelter, at Laugerie Haute where the enthusiatic local guide passes me two replica skulls – one Neanderthal and one CroMagnon. With one in each hand, it is a strange sensation to sit on a stone ledge where such long distant ancestors would also have taken their ease. Early tools, including 20,000-year-old needles and decorated artefacts, from the Gravettian, Solutrean and Magdalenian periods, have been found here, and several burials. It is thought this site was used – perhaps as a tribal meeting-place – over a period of about 10,000 years. At nearby Laugerie Basse, finds have included prehistoric musical pipes, whistles and, much to Iain's delight, a bullroarer.

Next we move on Abri du Poisson which, as its name suugests, features a fish, and a very fine fish it is too – a male salmon that is over a metre long. Originally painted red, it is carved on the ceiling of a little cave and was discovered in 1912. But shortly afterwards an attempt was made to remove the fish and sell it to the Berlin Museum. Luckily this was prevented but deep grooves carved around it remain as evidence.

To put all the images we have seen in context, a trip to the Museum of Prehistory in Les Eyzies is necessary. Although housed in a medieval castle built on a prehistoric site, the museum's interior is designed in a state-of-the-art, clean, modern style. The archaeological evidence for how everyday life in prehistory was lived is well presented. The only disappointent is the lack of books in English in the museum shop but then, why should there be – we are in France after all.

To make up for this, back at the hotel that night Dr Morley

**6. A procession of horses sculpted on the wall of a rock shelter, or *abri,* at Cap Blanc.**

**7. A bas-relief of a male salmon carved into the rock ceiling of a small cave at Abri du Poisson. The rectangular groove around the fish was made when someone tried to remove it in order to sell it to a museum shortly after it had been discovered. Luckily state intervention prevented this from happening.**

**8. Meeting the ancestors in the form of Neanderthal and CroMagnon (replica) skulls at Laugerie Haute rock shelter near Les Eyzies in the Vézère valley. © Lindsay Fulcher.**

**9. One of the many masterly monochrome drawings, made using black manganese oxide, in the cave at Rouffignac. This one shows a mammoth (of which there are many), a goat and an ibex inside the 'Cave of 100 Mammoths'.**

**All images courtesy of Atout France unless otherwise marked.**

gives us a wide-ranging talk about the arrival of modern humans in Europe, including an interpretation of Neanderthal life and culture. Iain also tells us that the pigments used for the cave paintings, black manganese oxide and red, orange and yellow ochre, were all obtained from sources in the surrounding countryside. Perhaps that is why they form such a pleasing Palaeolithic palette.

As to the thorny question about why the paintings were made, there are many theories. The idea of these images being a backdrop to sympathetic magic hunting rituals is out of favour now. In *The Mind in the Cave, Consciousness and the Origins of Art*, David Lewis-Williams puts forward the idea that cave art acts as a permeable membrane between this world and the realm of the spirits. But the wealth of interpretations matches the wealth and variety of the art. One thing is agreed – it was not just art for art's sake. ■

**10. A panoramic view over Les Eyzies and the surrounding area.**

**11. A mighty bison in the cave of Font-de-Gaume in the Vézère valley. The artist has used a bulge in the wall of rock to enhance the shape of the animal and give it a sculptural, 3-D quality.**

**12. A modern-day relative of the auroch on the prehistoric farm at Le Thot.**

**13. A megaloceros (an extinct genus of deer) with its high branching antlers, flanked by two horses in the Hall of the Bulls in the replica cave, Lascaux 2.**



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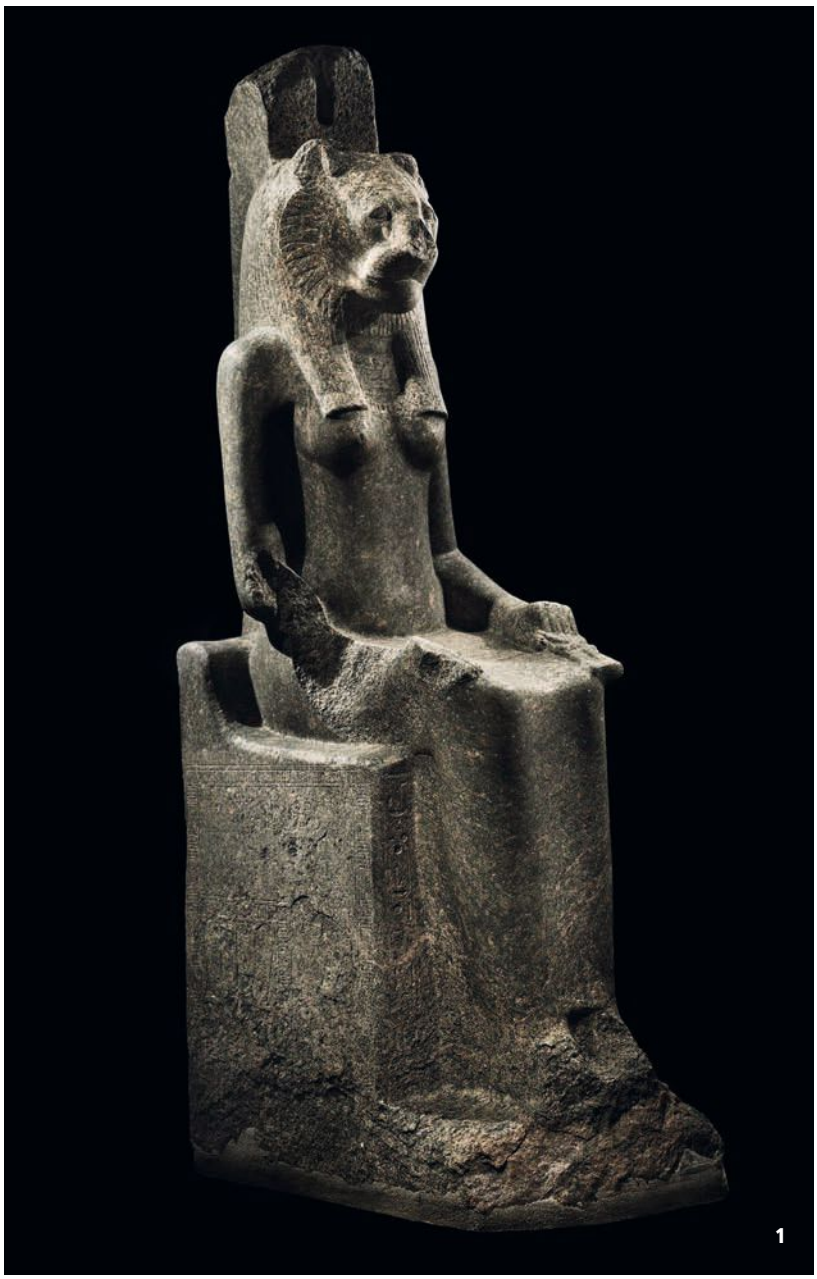
ABTOT



**1. Monumental granite Egyptian Sekhmet, 18th Dynasty, *circa* 1403-1365 BC. H. 209.5cm. (Lot 23: $4,170,000/ £2,769,108).**

**2. Large Egyptian wood mummy mask 25th-early 26th Dynasty, *circa* 750-600 BC. H. 33.7cm. (Lot 22: $1,450,000).**

**3. Fragmentary Egyptian red granite head of Amenhotep III, *circa* 1390-1353 BC. H. 24.4cm. (Lot 5: $1,330,000).**

# From John Lennon's lion-headed goddess

**Dr Jerome M Eisenberg** reports on two exceptional end-of-year antiquities auctions held at Sotheby's and Christie's in New York in December

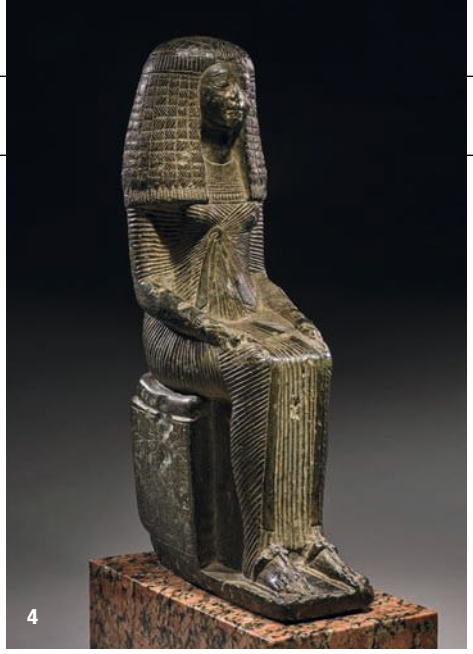
The 8 December sale at Sotheby's New York entitled *Ancient Egyptian Sculpture & Works of Art*, contained only 43 lots of Egyptian antiquities, with two lots from the Near East and Iran. It omitted Classical antiquities for the first time – except for a single lot of a Greek bronze griffin *protome*. In future, only Sotheby's New York will feature Egyptian art, while Sotheby's salerooms in London will offer Classical art.

The monumental Egyptian granite figure of the enthroned lion-headed goddess Sekhmet (**1**) from Thebes, 18th Dynasty reign of Amenhotep III, *circa* 1403-1365 BC (H. 209.5cm), once in a Swiss private collection, was acquired by John Lennon in the 1970s. His estate sold it at Sotheby's New York in May 1986 to A Albert Taubman, the then owner and chairman of Sotheby's, for $742,500, a world record at that time for an Egyptian work of art. Now estimated at $3,000,000-$5,000,000, it sold for $4,170,000 (£2,769,108).

Next, the coverpiece of the auction's catalogue, a magnificent, large (H. 33.7cm) wooden mummy mask (**2**), 25th-early 26th Dynasty, *circa* 750-600 BC, from the famed Helena Rubinstein collection, sold at her sale at Parke-Bernet Galleries, New York, in April 1966; then in Sotheby's New York Klaus Perls sale in June 1995 for only $57,500. Now estimated at $300,000-$500,000, a grand battle ensued with the winner finally obtaining it for an astounding $1,450,000.

A very sensitively-carved, over-lifesized (H. 24.4cm) but fragmentary, red granite head of Amenhotep III (**3**), *circa* 1390-1353 BC, was acquired by a Californian collector in Switzerland during the 1960s and exhibited at the Detroit Institute of Arts in 1973. The estimate of $150,000-$250,000 did not deter two determined bidders from battling it out, with the victor purchasing it for another surprising bid of $1,330,000.

The charming steatite figure of the Lady Iset, Chantress of Sobek (**4**), 19th Dynasty,



**4. Egyptian steatite figure of the Lady Iset, *circa* 1292-1250 BC. H. 40.6cm. (Lot 6: $760,000).**

**5. Egyptian basalt bust of Tuthmosis III, 19th Dynasty, *circa* 1479-1426 BC. H. 12.1cm. (Lot 4: $250,000).**

**6. Egyptian basalt figure of a man, 30th Dynasty-early Ptolemaic Period, *circa* 380-200 BC. H. 60.3cm. (Lot 26: $187,500).**

**7. Egyptian serpentine *ushabti*, late 18th Dynasty, *circa* 1330-1292 BC. H. 19.8cm. (Lot 19: $125,000).**

**8. Egyptian pale blue faience *ushabti*, 26th Dynasty, *circa* 570-526 BC. H. 18.4cm. (Lot 21: $137,500).**

# to Helena Rubinstein's mummy mask

*circa* 1292-1250 BC (H. 40.6cm), with hieroglyphs on three sides of her seat, was purchased by the consignee from David Pollak in 1950. It sold for $760,000, within an estimate of $600,000-$900,000.

A small basalt bust of Tuthmosis III (H. 12.1cm), wearing a *nemes*-headcloth (5), 19th Dynasty, *circa* 1479-1426 BC, from a late 19th-early-20th-century English collection, with an estimate of $200,000-$300,000, brought in $250,000.

This was followed by a fine, but headless, basalt figure of a man (6), 30th Dynasty-early Ptolemaic Period, *circa* 380-200 BC (H. 60.3cm), originally owned by the German scholar Professor Dr Julius Meier-Graefe (1867-1935). It sold for $187,500, well beyond its estimate of $80,000-$120,000, to a European collector.

Made of serpentine, an intact *ushabti* of Kefri, Mistress of the House, wearing a *ba*-bird pectoral (7), late 18th Dynasty, *circa* 1330-1292 BC (H. 19.8cm) was published in the Swiss exhibition Geschenk des Nils in 1978. It is rare that an 18th Dynasty *ushabti* was made for a woman. Estimated at $100,000-$150,000, it realised a respectable $125,000.

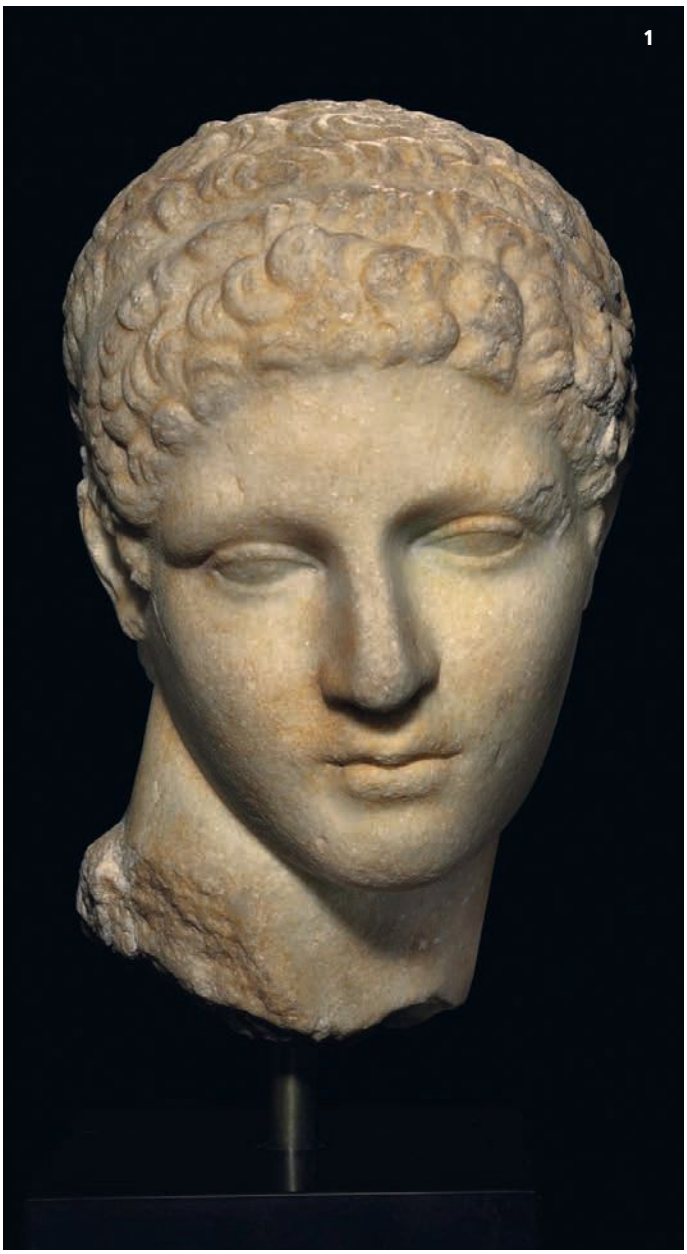
A superb pale blue faience *ushabti* of Neferibresaneith, wab-priest of the King and Royal Chancellor of Lower Egypt (8), 26th Dynasty, reign of Amasis, 570-526 BC (H. 18.4cm), from the same collection of Felix J May, Zurich, was purchased between 1978 and 1981. It sold for $137,500, well beyond the $60,000-$90,000 estimate.

It is interesting to note that all except one of these top eight lots were bought by private American collectors, who were mainly bidding by telephone.

This sale of just 46 well-described lots totalled an impressive $8,956,500 with 73.9% sold by number of lots and 94.2% by value. (All of the prices in this sale include the buyer's premium.)

**• Sotheby's has announced a radical change in their schedules for the antiquities sales. The sale of Egyptian and Near Eastern antiquities will be held only in New York under the direction of Richard M Keresy, who has been with the firm for an astounding 46 years. The next sale is scheduled for December 2016.**

**Also, from now on Classical antiquities will be sold in London with Florent Heintz at the helm; the next sale is scheduled for either June or July 2016.**






**1. Hellenistic marble head of an athlete, *circa* 2nd century BC. H. 31.1cm. (Lot 15: $365,000/ £243,333).**

**2. Hellenistic bronze boy, *circa* 3rd-2nd century BC. H. 41.2cm. (Lot 14: $353,00).**

**3. Etruscan bronze warrior, or Laran, god of war, *circa* 400 BC. H. 30.1cm. (Lot 43: $137,000).**

**4. Roman marble Juno, *circa* 2nd century BC. H. 58.4cm. (Lot 63: $257,000).**


# Arms and athletes, gods and warriors

Classical antiquities attracted the highest prices at the Antiquities Sales at Christie's New York on 9 December. A fine life-sized (H. 31.1cm) Hellenistic marble head of an athlete (**1**), *circa* 2nd century BC, acquired by the late Lynn Wolfson *circa* 1976, estimated at $120,000-$180,000, sold after spirited bidding to a European dealer by telephone for $365,000 (£243,333).

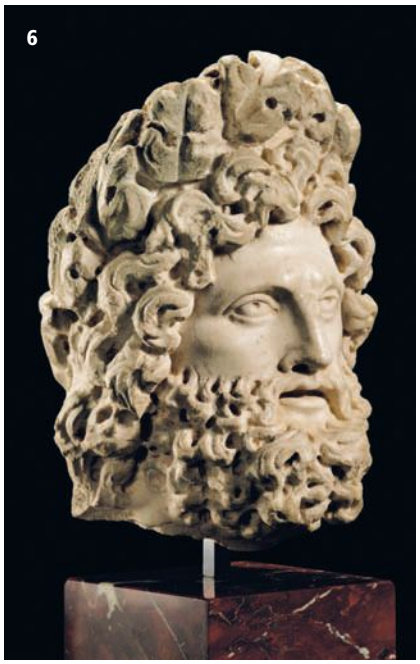
A large (H. 41.2cm) and lively Hellenistic bronze boy wearing a belted *exomis* (**2**), 3rd-2nd century BC, was acquired in 1930 by Spink & Son, London, who sold it to Dr Ernsy Holzer, Graz, Austria, in 1936, thence by descent. Estimated at $300,000-$500,000, it attracted $353,000 from an American collector.

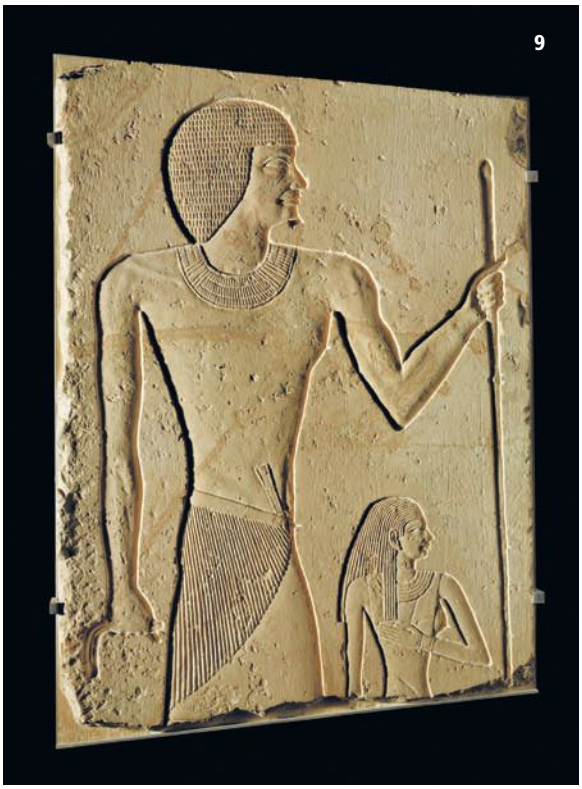
Either a warrior or Laran, the god of war (**3**), a nude, helmeted Etruscan bronze male figure (H. 30.1cm), *circa* 400 BC, had been in the possession of Herbert Cahn, Basel, in 1952 before subsequently passing through several hands. With an estimate of $100,000-$150,000, it was acquired by another American collector bidding by telephone for $137,000.

An enthroned Roman marble Juno (**4**), *circa* 2nd century BC (H. 58.4cm), reportedly from the Piguatelli collection, Palais Royal, Paris, was sold at the Drouot, Paris, in 1976. It now went to an American collector bidding by telephone for $257,000, close to its minimum estimate of $250,000-$350,000.

A fine, if chinless, Roman marble head of an athlete (**5**), *circa* 1st century BC (H. 23.8cm), reportedly from the Palazzo Mondragone, Rome, was with Dr Jacob Hirsch (1874-1955) and was acquired by Ian Woodner (1903-1990) in the Hirsch sale conducted by Adolph Hess and William Schab in December 1957. Though the estimate was a conservative $20,000-$30,000, a bidding war resulted in its purchase by an American dealer for $125,000.

Sensitively-carved, under-lifesized (H. 19cm) Roman marble head of Jupiter (**6**), late





**5. Roman marble head of an athlete, *circa* 1st century BC. H. 23.8cm. (Lot 79: $125,000).**

**6. Roman marble head of Jupiter, late 2nd-early 3rd century AD. H. 19cm. (Lot 75: $112,500).**

**7. Roman bronze right arm, 1st-3rd century AD. L. 66cm. (Lot 68: $100,000).**

**8. Roman gilt bronze right arm, 1st-3rd century AD. L. 60cm. (Lot 66: $93,750).**

**9. Egyptian limestone relief, 5th-6th Dynasty, *circa* 2494-2181 BC. H. 69.8cm. (Lot 113: $118,750).**

**10. Urartian bronze helmet, first half of the 8th century BC. H. 30.5m. (Lot 46: $118,750).**

2nd-early 3rd century AD, with an estimate of $50,000-$70,000, brought in $112,500 from an American dealer.

An over-lifesized Roman bronze right arm (**7**), 1st-3rd century AD (L. 66cm), estimated at $40,000-$60,000, was won by an American dealer for $100,000.

A second Roman bronze/gilt right arm (**8**) from the same period, (L. 60cm), had sold, with an estimate of $50,000-$70,000, at Sotheby's Bill Blass collection sale in October 2003 for $72,000 with buyer's premium. Now estimated at $50,000 -$70,000, it sold to the same dealer for $93,750.

A finely detailed Egyptian Old Kingdom sunk limestone relief (**9**), depicting partial images of an official with a much smaller female (his wife perhaps) 5th-6th Dynasty, *circa* 2494-2181 BC, (H. 69.8cm) came originally from prominent collector Ian Woodner (1903-1990), who acquired it before 1969. Estimated at only $30,000-$50,000, it was ultimately purchased by a well-known American collector for $118,750.

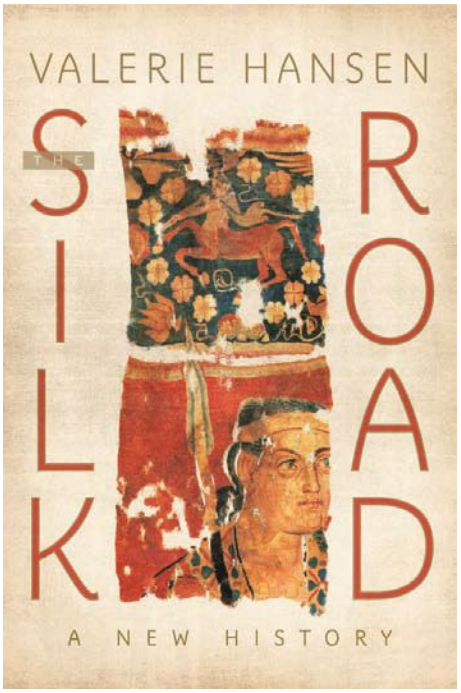
A typical Urartian bronze helmet with a lightning symbol (**10**), first half of the 8th century BC (H. 30.5cm), was properly estimated at $20,000-$30,000, but that did not prevent two keen bidders from actively contesting for it. It finally achieved a surprising $118,750 from another American collector bidding on the telephone.

The sale of 195 lots totalled $4,029,065 with 68.4% sold by number of lots. The percentage sold by value was not supplied by Christie's, probably due to the number of more expensive lots bought in.

(All of the prices in this sale include the buyer's premium.)

The Christie's sale of ancient jewellery was conducted online this year, 1-10 December, and there was no separate printed catalogue.

**• Note that there is a change of schedules for the Christie's Antiquities Sales – the next New York sale will be held on 12 April, then in October, and the London sales will be held in July and December 2016.** ■




**The Silk Road: A New History**

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|---|
| ***Valerie Hansen*** |
| Oxford University Press |
| 304pp, 19 colour and 61 black and white illustrations |
| Paperback, £12.99 |

The Silk Road was not the name of an ancient highway linking the Pacific shores of China with the Mediterranean coast of Asia Minor. It was an idea, invented in 1877 by the German geographer Ferdinand von Richthofen. He was the first to combine the accounts of Classical geographers, such as Ptolemy and Marimus, with Chinese sources in translation. The result, Valerie Hansen writes in *The Silk Road: A New History*, '*resembles a straight railway-line, cutting through Asia*'. She notes the resemblance between von Richthofen's map and his work. He was in China to scout a potential railway line linking the German sphere of influence in Shandong to Germany itself, via the coalfields near Xi'an.

As Hansen describes in this diligently researched and carefully assembled account, the so-called Silk Road was really '*a stretch of shifting, unmarked paths across massive expanses of deserts and mountains*'. West of Chang'an in Xi'an, travellers passed through the Gansu Corridor, a 600-mile passage between the Gobi Desert and the Qinghai Mountains. At the oasis city of Dunhuang, the gateway to modern Xinjiang, the New Frontierlands conquered by the Qing dynasty in the 18th century, the road forked in order to skirt the Taklamakan Desert. After that, they threaded through the passes of Earth's largest mountain ranges, then descended west for Samarkand or south for India.

Few travellers covered the 2000 miles between Chang'an and Samarkand; fewer still claimed Marco Polo's feat of crossing Eurasia. The only long-distance caravans with hundreds of animals were diplomatic missions; in one of them, the dignity of the king of Khotan was represented by more than a thousand emissaries. Most of the Silk Road's business was a 'trickle trade'. Goods changed hands multiple times, and merchants travelled in small caravans for a few hundred miles, from their home town to a major oasis and back. Nor was silk the most important item in their luggage.

Most of the so-called Chinese silks that have come down to us from medieval Europe were woven inside the Byzantine Empire. Of a thousand 'Chinese' examples, dating from the 7th to the 13th centuries, recently tested only one silk had been made there. Nor, despite the testimony of Pliny, is it likely that China traded directly with the Roman Empire. Just as no trace of a physical Silk Road can be found in Central Asia, no Roman coins have turned up here either.

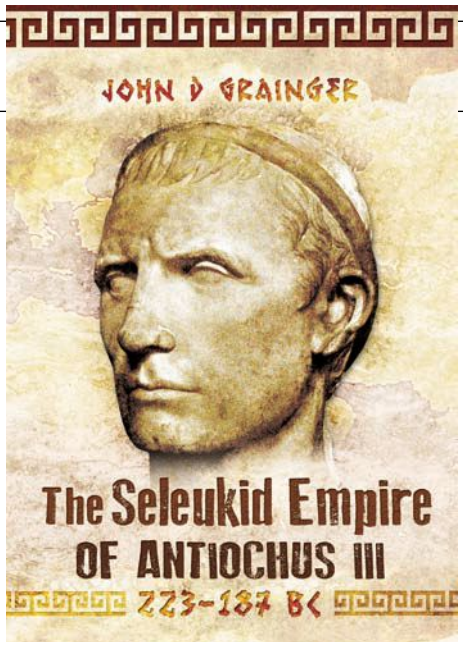
Hansen's debunking of the myth displays scholarship of the highest order. So does her reconstruction of the history. In six chapters, she examines six oasis stops on the fringes of the Taklamakan Desert, and traces the history of Silk Roads between the first Chinese contact with Westerners in the 2nd and 3rd centuries AD, and the 11th century, when Khotan, becoming the first city in Xinjiang to convert to Islam, opened a new chapter in the region's history. The richness of the cultural exchanges, and the delicacy with which Hansen reconstructs them, is impressive.

On the southern route, Buddhist immigrants from Gandhara in modern-day Afghanistan introduced the merchants of Niya to the skill of keeping records on wood. At Kucha, the great translator Kumarajiva (AD 344-413) turned Buddhist texts into Chinese. Meanwhile, along the northern route, the dry conditions at Turfan preserved the correspondence of the city's merchants when, in AD 640, they fell under the control of the Tang dynasty. But 72 years later, when Samarkand fell to Muslim armies in AD 712, large communities moved east to the oases.

By now, Zoroastrians from Iran had settled at Chang'an. Their tombs portray the Zoroastrian afterlife in more detail than any surviving Iranian examples, but they buried their dead in the Chinese style. The Buddhist cave art at Dunhuang is the best preserved of any in China, and the 40,000 manuscripts in the library cave include the world's oldest surviving book, the *Diamond Sutra*.

This remarkable book not only disposes of a false image of the Silk Road, it restores a lost world to our understanding – a world of sophisticated contacts between different cultures, and sophisticated exchanges that went far beyond silk.

*Dominic Green*




**The Seleukid Empire of Antiochus III, 223-187 BC**

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|---|
| ***John D Grainger*** |
| Pen & Sword |
| 228pp, 4 maps |
| Hardback, £19.95 |

'*How Alexander wept when he had no more worlds to conquer, everyone knows*,' wrote Dickens in *Bleak House*, '*or has some reason to know, the matter having been rather frequently mentioned*.' The decline of the Classical curriculum has reduced the frequency of our allusions to a lachrymose Alexander, but mentioned the mighty Macedonian often is. Like the Shakespearean triumvirate, Caesar, Cleopatra and Antony – Alexander remains one of the few ancients known to a modern audience.

Still, even in Dickens' day, when the schoolroom resounded with conjugations and declensions, few could have described what happened after Alexander's death, when his generals divided his empire. Of the Ptolemies, the last of Egypt's dynasties, we remember only Cleopatra VII, the last ruler in a 300-year line; of the Seleukids, who lasted from 312 BC to 63 BC, we recall only Antiochus IV Epiphanes, whose discovery of his own divinity so offended the Maccabees in Judea.

Yet without these forgotten successors, Alexander's military conquests would have been meaningless. For nearly three centuries, the Seleukid Empire spread Hellenistic culture across the Levant and Asia Minor. Its founder, Seleukos I Nikator (Romanised as Seleucus I Nicator), cobbled together an empire linking the Aegean with modern Turkmenistan and India: the largest state in the ancient world. It was always rickety, though, and nothing shook the empire like the death of an emperor.

When Seleukos I died, civil war broke out, obliging his son Antiochus I to refound the empire. John D Grainger, who described the first Seleukid century in *The Rise of the Seleukid Empire* (2014), begins the second volume of his Seleukid trilogy with the empire in pieces. Antiochus III is the

survivor of three feuding brothers, but the emperor who called himself "Lord of Asia" ruled only Syria and Babylon.

The next 40 years are the hinge of Seleukid history and Grainger's trilogy. Antiochus III ruled for 35 of them, longer than any other Seleukid. And because Livy and Polybius chronicled his reign, we know more about him too. What emerges, Grainger finds, is an image of '*persistence and determination*'. Antiochus devoted his life to restoring the kingdom of his ancestors.

If he did not succeed entirely, he strengthened what he held. Defeated by the Ptolemies at Raphia (217 BC) – one of the greatest battles of the Hellenistic age – Antiochus turned east, forcing his Persian and Bactrian vassals to acknowledge his authority, and brushing his grandfather's eastern border by confirming a historic alliance with Sophagasenos, ruler of the Kabul region.

Now protected to the east by a '*diplomatic web*', in 205 BC Antiochus turned westwards. At Panium (198 BC), he avenged his defeat at Raphia, and recovered Koile Syria. By the time he was 50 years old, he had restored the empire, and begun binding together its provinces with a '*thin*' but functional government. But it seems that success stirred the '*active and vigorous*' Antiochus to the '*heady and stimulating*' dream of outdoing Alexander.

In 196 BC, Antiochus crossed the Hellespont – and ran into the rising power of Rome. At Magnesia (190 BC), a Roman army led by Lucius Cornelius Scipio and his brother Scipio Africanus routed Antiochus' troops. Antiochus lost territory in the west, and owed the Romans a massive indemnity, but he still had enough troops to turn east again. He was killed in 187 BC, attempting to loot the temple of Bel at Elymais.

Antiochus bequeathed that unpaid indemnity to his son, Seleukos IV. He also bequeathed a *'united and well-governed kingdom'*, which was able to totter on for another century. We are, Grainger says, so '*hypnotized*' by the rise of Rome that we ignore the Seleukid and Ptolemaic interlude. His clear and fascinating account breaks the spell. Unlike Antiochus' hapless heirs, we can look forward to the last century of the Seleukid empire.

*Dominic Green*

**In Search of the Greeks**

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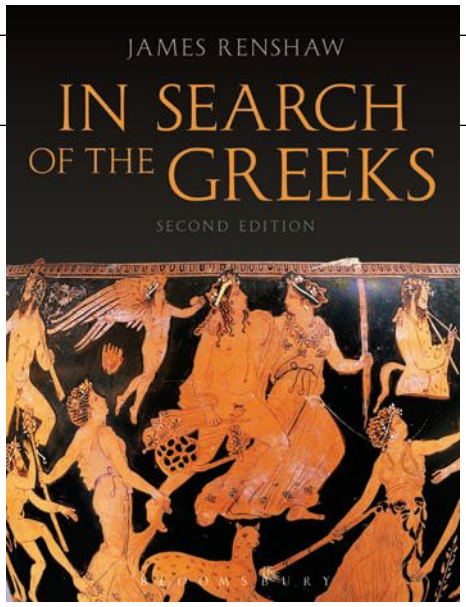
| ***James Renshaw*** |
| Bloomsbury |
| 304pp, 146 illustrations |
| Paperback, £17.99 |




Only eight years after James Renshaw's popular *In Search of the Greeks* (2008) was first published, Bloomsbury have brought out a second edition of the book, with two new chapters and a fresh and colourful layout. Renshaw, a Classics teacher and author of the companion volume, *In Search of the Romans* (Bloomsbury, 2012), Renshaw sets out to make the Greek world as engaging and unintimidating as possible to the unfamiliar reader.

*In Search of the Greeks* covers the fundamentals of Greek civilisation – religion, the Olympics, Athenian society, democracy and drama, and Sparta – and includes new chapters 'A History of the Ancient Greek World' and 'Greek Thought'. The first takes the reader from Schliemann's and Evans' discoveries of Mycenaean and Minoan sites through to the Greek world under the Roman Empire. This lively overview, which also covers Greek colonies and literature, is supplemented by a detailed timeline.

In 'Greek Thought', Renshaw neatly summarises complex ideas in his accessible style, leaving readers with some knowledge of the biographical context of key philosophers and a fair impression of their major works. Here he introduces the important word *logos*, which can take on a variety of meanings in philosophical works, and he recounts the parable of the cave from Plato's *Republic*, which he illustrates with a diagram. There are plenty of suggestions for books worth further reading, not just in this chapter, but throughout the text, to encourage the reader to explore both the subject and the source material more closely.

All sources are quoted in translation. When Greek or Latin words are used, they are explained or put into English. Renshaw even provides notes on pronunciation at the start of the book, and there is also an ample glossary. There are tables, diagrams, plans, maps, copious illustrations, as well as appendices on currency, the calendar and musical instruments.

With a clear, text-book style format, complete with 'review and reflect' questions at the end of each section, *In Search of the Greeks* is definitely student-friendly although, having said that, Renshaw does not attempt to dumb down the topics he covers; nor does he try to appeal exclusively to a younger readership. This book serves as a solid introduction to the ancient Greeks for complete beginners of any age.

*Lucia Marchini*

**Athenian Comedy in the Roman Empire**

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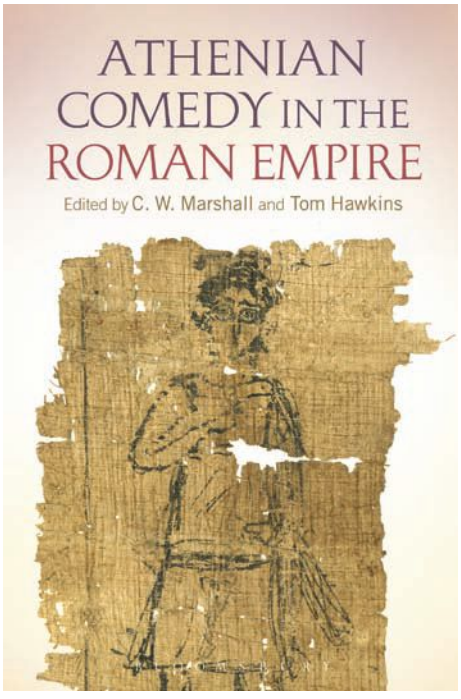
| ***Edited by CW Marshall and Tom Hawkins*** |
| Bloomsbury |
| 304pp |
| Paperback, £22.99 |

Greek drama is still as relevant as ever, with productions of the tragedies of Aeschylus, Sophocles and Euripides being staged across the globe today. Comedies by the Athenian playwrights, particularly the Old Comedy of Aristophanes (including *The Clouds*, *The Frogs* and *Lysistrata*), are still performed and have proved influential over the centuries, but they generally attract far less attention than their tragic counterparts.

This can be the case in scholarship, too. The reception of Athenian tragedy is, in general, much better understood than that of comedy. This is a situation CW Marshall (Professor of Greek at the University of British Columbia) and Tom Hawkins (Associate Professor of Classis at Ohio State University) set out to rectify with *Athenian Comedy in the Roman Empire*, a thoughtful collection of essays offering the first in-depth exploration of how Romans in the imperial era reacted and responded to Classical Athenian comedy.

The book begins with a useful overview of Athenian comedy, focusing on the most celebrated of the comic writers, Aristophanes (*circa* 446 BC-*circa* 386 BC) and Menander (342/1-291 BC), who represent the genres of Old Comedy and New Comedy respectively. This introductory essay by Hawkins and Marshall also highlights the issues of '*ignorance and misapprehension*' surrounding the subject of Athenian comedy in Rome. For instance, as they explain, while sculptures, wall paintings and other evidence indicate that comedy was



important in Rome, and while Athenian comedy formed part of the school curriculum, it is not known with certainty whether the Athenian comedies were still being staged.

Other essays in the collection analyse how Roman authors responded to particular features in Greek comedy. Julia Nelson Hawkins, for example, gives an intriguing assessment of how Aristophanic speaking genitals were later used in Roman satire by Horace, Martial, Persius and Petronius, perhaps as a result of 'male hysteria'. Elsewhere, Hawkins discusses how Dio Chrysostom adopted the Aristophanic *parabasis* (a direct choral address to the audience) in some of his orations, and Ralph M Rosen explores how Aristophanes and Old Comedy were viewed by Plutarch and Lucian.

Between them, the contributors draw their research from a fascinating range of sources, including letters, poetry, essays, mosaics and inscriptions – all of which serve to offer new perspectives on Athenian comedy. *Athenian Comedy in the Roman Empire* presents a series of insightful and meticulously researched chapters, which would be a valuable resource for anyone studying the tradition and legacy of Greek comedy or the relationship between Roman and Greek literary culture.

*Lucia Marchini*

**In Bed with the Ancient Egyptians**

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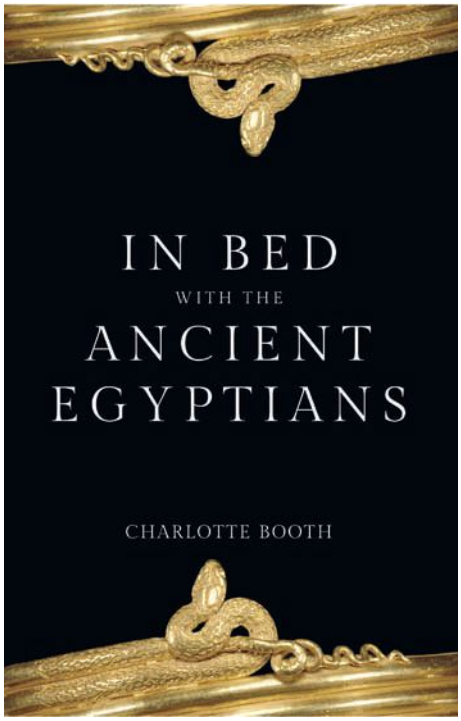
| ***Charlotte Booth*** |
| Amberley |
| 304pp, 44 illustrations |
| Hardback, £20 |

In the latest instalment of Amberley's *In Bed with…* series (previous titles include *In Bed with the Tudors* by Amy Licence and *In Bed with the Romans* by Paul Chrystal), Egyptologist Charlotte Booth explores the day-to-day role of all things related to love, sex and desire in Ancient Egypt. Given the sometimes limited evidence, it is difficult to determine exactly what the average Ancient Egyptian got up to in the bedroom, but by looking at art, archaeological remains, poetry and other textual evidence, Booth creates a vivid account of a society where sex was of great importance and where it was intertwined with religion and ideas about the afterlife.

The book introduces us to the Egyptian language of sex, *nk* being one of the most common of the 12 or so words for penetrative intercourse used in everyday speech. Other sex acts, such as fellatio and masturbation are generally referred to only in religious contexts. Geb, the earth god, for instance, is on occasion shown performing fellatio upon himself, while religious texts often describe how the creator god Atum made Shu, god of air, and Tefnut, goddess of moisture, through masturbation. One




papyrus reads: '*I made every form alone, without another having developed and acted with me… For my part, the fact is that I acted as husband with my fist, I copulated with my hand…*'

As the vast majority of sources on sex were created by male hands, the perspective they offer is rather one-sided, as Booth is well aware. For example, she explains that while there was a sign for an ejaculating penis, which was associated with fertility and virility, '*the female climax was not so readily referred to, and when it was, it was shrouded in mystery*'.

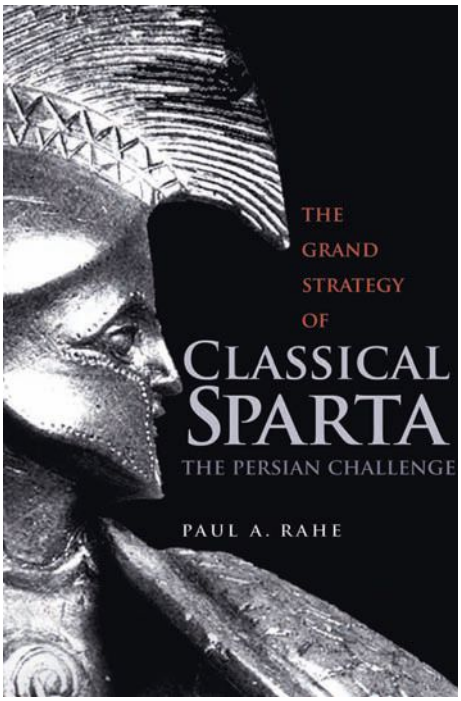
Yet, in the chapters on childbirth and on medicine, there is a wealth of fascinating information on the female experience of contraception, fertility, pregnancy, labour and nursing. It was believed that female reproductive organs were free to move around the body, and, according to the Kahun Gynaecological Papyrus, the wandering womb was the cause of a great number of afflictions ranging from earache to a stiff neck. Equally as interesting is the dream interpretation papyrus we encounter in the chapter on homosexuality, which interprets a woman dreaming of sex with other women, or even her husband, as bad omens, but intercourse with a ram, wolf or ibis as good omens.

As well as trying to establish what marriage and sex was like for ordinary Egyptian men and women, Booth explores the sex lives and relationships of the pharaohs. The incestuous marriages of some Egyptian rulers are well known, and the book offers a simple and concise overview of this practice. In her explanation, Booth cites the practical reasons of ensuring loyalty and reducing the number of potential claimants to the throne by limiting the gene pool, claiming religious justification, since gods often married their siblings. Incestuous marriages were for the divine or the royal, not for the Egyptian population at large.

The author's intention is to inform rather than to shock and scandalise, but her measured approach does not make the fascinating subjects discussed seem at all dry. *In Bed with the Ancient Egyptians* surveys an impressive amount of information, covering nearly every aspect of ancient Egyptian civilisation and a vast historical span, all at a lively pace.

At various points throughout the book Booth attempts to relate things to modern Western society, making the rich material accessible to readers who have little prior knowledge of ancient Egypt.

*Lucia Marchini*




**The Grand Strategy of Classical Sparta: The Persian Challenge**

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|---|
| ***Paul A Rahe*** |
| Yale University Press |
| 424pp, 17 black and white illustrations, 27 maps |
| Hardback, $38, £26.50 |

Classicist and historian Paul A Rahe is Professor of History at Hillsdale College, Michigan, USA, and the author of many scholarly works. His latest book, *The Grand Strategy of Classical Sparta: The Persian Challenge*, is the first of a proposed trilogy.

At the time of the conflict between Persia and Greece, 2500 years ago, the Persian Empire held sway over two fifths of the human race and its army was the most powerful in the world. Yet despite fielding one of the largest bodies of fighting men ever assembled, it was defeated by forces drawn

from a group of city states, who were often in conflict with one another.

In his introduction Professor Rahe sets out the scope of the book and its aims in a clear manner. He goes on to show why in times of trouble, the Hellenes looked to Sparta for leadership. He gives a detailed description of life in Sparta around 480 BC, explaining its political and civil organisation, as well as the system used to breed and train warriors. As individual fighters they were the equal of any soldier and, when fighting as a unit, they were unstoppable. The Spartans were a pious people who, it seems, were constantly on the alert to ensure that they did not offend the gods. Proud, confident and disciplined, they were not intimidated by men who gave themselves grand titles because, they reasoned, irrespective of rank any man, however grand, is in the end just a man. The author goes on to describe the attitude of the Persians, what was happening within their empire, and why conflict with Greece was inevitable.

To the general reader, early war is often seen as battles fought between infantry on an open plain. Rahe shows, however, that the outcome of this conflict was also governed by the use of cavalry and the navy. In the navy, the trireme was the most sophisticated vessel and fighting machine of the time, and its use by the Greeks was crucial in their final victory over the Persians. How the Athenians produced a number of these ships in such a short space of time is related in convincing detail.

Rahe also tells us that the oarsman of the triremes had to build enough stamina to row for hours on end by drilling for many months, so they could, as he puts it, '*turn the vessel on a dime*'. He also describes conditions on the trireme – although it was a sleek, elegant, well-designed ship, its lower levels were foul smelling places, awash with urine and human excrement and general waste.

It is pointed out that during the course of this protracted war, there was betrayal on many occasions, on both sides of the conflict. He describes how internal divisions were rife in all Greek city states and were a major stumbling block that made the formation of a united alliance against the Persians so difficult to achieve. He argues, convincingly, that Sparta was the main force that eventually brought the alliance into being.

Although the major battles are described in detail, there are so many asides that detract from the flow that it is impossible to feel the true excitement and terror of the battlefield. Nevertheless, there is a wealth of information in this book, covering almost every aspect of the complex situations on both sides that resulted in such a crushing defeat for the Persian Empire.

*David Sim*

# CLASSICAL CONUNDRUMS

## **Adam Jacot de Boinod** poses a vocabulary quiz from Latin and Ancient Greek

**Can you guess the correct definition from the following three options for:**

**1) erion (Homeric Greek)**
A) a sepulchral mound
B) an indistinct pronunciation, such as produced by a lisp or by stammering
C) violet-coloured

**2) rumusculus (Latin)**
A) a mouse, rat or small rodent
B) idle talk, common gossip
C) anything badly formed or out of shape

**3) katochrao (Ancient Greek)**
A) to turn very pale
B) to close an eye as when taking aim at a target
C) to make flattering speeches

**4) nave (Latin)**
A) of a pale green passing into greyish blue
B) diligently, actively, zealously
C) at random, hit or miss, at the mercy of chance

**5) keimelion (Homeric Greek)**
A) evening time or twilight
B) having a pearly lustre
C) treasure or an heirloom

**6) scabillum (Latin)**
A) an urchin
B) a footstool
C) wool taken from a dead sheep

**7) keadzo (Ancient Greek)**
A) to poke around with one's nose, as dogs do
B) to blow with a gentle sound (of the wind)
C) to shiver, shatter, sever, separate

**8) obsonium (Latin)**
A) a yellowish golden colour
B) a rhetorical device of damning with faint praise
C) a relish, sauce, side dish

**9) kelarudzei (Homeric Greek)**
A) to run or trickle
B) to coagulate, congeal, shrink, wither
C) to belittle someone verbally

**10) horsum (Latin)**
A) impulsively; without deliberation
B) hither, this way
C) a tree bare of leaves or twigs

**11) iknoumenos (Ancient Greek)**
A) to be without energy
B) fittingly
C) uncomfortable, bothered, uneasy

**12) prolubium (Latin)**
A) the lower part of a rainbow
B) the swampy surface of a wet ploughed field
C) desire, inclination, fancy

• Adam Jacot de Boinod has worked as a researcher on the BBC television quiz programme *QI*. He is the author of *The Meaning of Tingo* and creator of the iPhone App *Tingo*.

**ANSWERS**

1A) a sepulchral mound. 2B) idle talk, common gossip. 3A) to turn very pale. 4B) diligently, actively, zealously. 5C) treasure or an heirloom. 6B) a footstool. 7C) to shiver, shatter, sever, separate. 8C) a relish, sauce, sidedish. 9A) to run or trickle. 10B) hither, this way. 11B) fittingly. 12C) desire, inclination, fancy

## UNITED KINGDOM

### BATH

***Reflections: Contemporary Ink Paintings by Wu Lan-Chiann***

In her ink paintings, Wu Lan-Chiann blends tradition with modernity and unites Chinese and Western ideas and methods of representation. This, her first solo exhibition in the UK explores universal themes such as the passing of time, fleeting moments, nature and the cycles of human life.

**Museum of East Asian Art**
+44 (0)1225 46464
(www.meaa.org.uk)
Until 15 May 2016.

© MUSÉE DU QUAI BRANLY, DIST. RMN-GRAND PALAIS / PATRICK GRIES / VALÉRIE TORRE

### CARDIFF

***Treasures: Adventures in Archaeology***

During Wales' *Year of Adventure*, visitors to the National Museum of Cardiff can follow in the footsteps of intrepid archaeologists and explorers, both real and fictional, from all over the globe. This exhibition celebrates the work of Giovanni Belzoni, Flinders Petrie and Adela Breton and looks at the influence of historical adventurers and archaeological discoveries in popular culture –from Tintin to Indiana Jones. Highlights include: Inca gold, Egyptian mummies, Viking skulls recently unearthed on Anglesey, a 19th-century skull carved from rock crystal (above) from France and another from *Indiana Jones and the Kingdom of the Crystal Skull*, as well as the hat, whip and jacket of cinema's most famous archaeologist.

**National Museum Cardiff**
+44 (0)300 111 2333
(www.museumwales.ac.uk)
Until 30 October 2016.

### CHATSWORTH, Derbyshire

***A Grand Tour of The Devonshire Collection at Chatsworth***

As part of the second season of *The Grand Tour* – a programme of four concurrent exhibitions held in Nottinghamshire and Derbyshire – Chatsworth tells the story of the Devonshires on the Continent, focusing on the 2nd Earl's Grand Tour with the philosopher Thomas Hobbes, as well as Georgiana, Duchess of Devonshire's two-year exile. This show also explores the impact of the Grand Tour on British art and architecture, such as the move to Palladianism, spurred on by the 3rd Earl of Burlington and the architect Inigo Jones, who brought back new ideas from Europe. Running alongside this exhibition is Chatsworth's *Old Master Drawings Cabinet*, which will present artistic interpretations of the Grand Tourists – beginning with Sebastian Vrancx's series of drawings, *Rome in Ruins,* from 1601.

**Chatsworth**
+44 (0)1246 565300
(www.chatsworth.org)
(www.thegrandtour.uk.com)
From 20 March to 23 October 2016.

### COMPTON VERNEY, Warwickshire

***Shakespeare in Art: Tempests, Tyrants and Tragedy***

Shakespeare's works have had a profound impact on all areas of culture, including the visual arts. This exhibition is one of the main events in this year's *Shakespeare 400,* organised in association with the Royal Shakespeare Company to commemorate 400 years since the Bard's death. It looks at key plays that have inspired painters, such as John Singer Sargent, Henry Fuseli, GF Watts, George Romney and the Pre-Raphaelites, and contemporary artists, like Tom Hunter. It also uses photography, film, sound and light and there will be recordings of RSC actors reciting lines from the plays to accompany some of the pieces.

**Compton Verney**
+44 (0)1926 645500
(www.comptonverney.org.uk)
From 19 March to 19 June 2016.

### DERBY

***Joseph Wright and the Lure of Italy***

Also part of *The Grand Tour* season in Derbyshire and Nottinghamshire, this exhibition presents the 18th- and 19th-century European travel experiences of individuals from Derbyshire, above all the artist Joseph Wright. Loans from the county's grand houses, such as works by Pompeo Batoni, will be shown alongside pieces from the Derby Museum's own collection. Highlights include Wright's own depictions of Italy, particularly his atmospheric 1774 colour sketch of *Vesuvius in Eruption* (top right), and, on show for the first time, a folio of Raphael's engravings that Wright bought when he was in Rome on his own personal Grand Tour.

© DERBY MUSEUM TRUST

**Derby Museum and Art Gallery**
+44 (0)1332 641901
(www.derbymuseums.org)
(www.thegrandtour.uk.com)
From 19 March to 12 June 2016.

### LONDON

***Shakespeare in Ten Acts***

Another *Shakespeare 400* exhibition – this one examines 10 significant performances of his plays. On view are: Elizabethan diary entries describing Shakespeare and Richard Burbage; the only extant script in the playwright's hand; one of only six authentic signatures; the First Folio and other rare printed editions; costumes and props, paintings, films and photographs. Of particular interest is a portrait of New York-born Ira Aldridge by James Northcote (below) painted in 1827, two years after he became the first black actor to play Othello on the London stage, alongside two playbills from the same production.

**British Library**
+44 (0)330 333 1144
(www.bl.uk)
From 15 April to 6 September 2016.

© COURTESY OF MANCHESTER ART GALLERY / BRIDGEMAN IMAGES

***Sicily: culture and conquest***

According to Goethe, '*Sicily is the key to everything*'. This strategically placed Mediterranean island, with swathes of land made fertile by volcanic lava from Mount Etna, has attracted diverse peoples for thousands of years. This exhibition displays exquisite artefacts from two of the most important periods of Sicily's occupation, showing how the island thrived under the Greeks, who first settled at Naxos in the 8th century BC, and the Normans who conquered the island in 1061 and went on to rule for nearly 200 years.

**British Museum**
+44 (0)20 7323 8299
(www.britishmuseum.org)
From 21 April to 14 August 2016.

***The Arts of Southeast Asia from the SOAS Collections***

Highlighting the diversity both of SOAS' collection and of Southeast Asian art, this exhibition showcases work from all over the region, from Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam, with a sweeping timescale from around 1000 BC until today. Many of the artefacts are on show for the first time, and they include ceramics, sculpture, metalwork, textiles, paintings and manuscripts on bark, palm leaves, copper sheets and paper. Together they reveal the role of religion, magic and divination, literature and contacts between the East and West in different Southeast Asian cultures.

**Brunei Gallery, SOAS**
+44 (0)20 7898 4915
(www.soas.ac.uk/gallery)
Until July 2016.

***Botticelli and Treasures from the Hamilton Collection***

In 1882, the 12th Duke of Hamilton sold his incredible collection of Botticelli's illustrations for Dante's *Divine Comedy* to Berlin. These rarely shown drawings were made on vellum, and date from 1480-95. There are 10 for each of the three parts of the *Divine Comedy – Inferno, Purgatory* and *Paradise* – making 30 in all, and they are on display alongside exquisite illuminated Renaissance manuscripts. The highlight of these is the *Hamilton Bible*, a fabulous book, which appears in Raphael's *Portrait of Pope Leo X* (1518-19) and has not been in the UK since it was sold at the same time as the Botticelli drawings.

**Courtauld Gallery**
+44 (0)20 7848 2526
(courtauld.ac.uk)
Until 15 May 2016.

***Giacomo Manzù: Sculptor and Draughtsman***

Organised with the Galleria d'Arte Maggiore in Bologna, this exhibition

COURTESY: GALLERIA D'ARTE MAGGIORE, BOLOGNA

presents a fascinating survey of the career of Giacomo Manzù (1908-1991) through some 50 drawings, bas-reliefs and sculptures. As well as his portraiture and depictions of religious subjects, for which he is best known, Manzù also created art based on mythology, such as this gilded bronze bas-relief *Orpheus in my Studio – Love,* 1987-88 (shown above) and still-life sculptures.
**Estorick Collection**
+44 (0)20 7704 9522
(www.estorickcollection.com)
Until 3 April 2016.

***Delacroix and the Rise of Modern Art***
The French Romantic artist Eugène Delacroix (1798-1863), painter of dramatic compositions with bold colours, was much lauded in his lifetime and continued to serve as an inspiration to other artists after his death. This exhibition looks at the work of Delacroix in relation to his contemporaries, including Courbet and Géricault, and his legacy. Among the many highlights by Delacroix's admirers are *Pietà (after Delacroix),* 1889, by Van Gogh and *The Apotheosis of Delacroix,* 1890-94, by Cézanne (shown below), who once remarked '*We all paint in Delacroix's language*'.
**National Gallery**
+44 (0)20 7747 2885
(www.nationalgallery.org.uk)
Until 22 May 2016.

***Russia and the Arts: The Age of Tolstoy and Tchaikovsky***
Starting in the 1860s, this exhibition features loans from the State Tretyakov Gallery in Moscow and tells the story of the golden age of Russian portraiture from Realism to Impressionism and Symbolism, through works that depict the period's leading lights in theatre, music and literature. The portraits also show how Russian artists used Impressionism and Symbolism as creative responses to the unsettled socio-political environment in Russia during the early 20th century.
**National Portrait Gallery**
+44 (0) 20 7306 0055
(www.npg.org.uk)
From 17 March to 26 June 2016.

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***Scottish Artists 1750–1900: From Caledonia to the Continent***
Ranging from grand portraits of British monarchs to romantic portrayals of Highland landscapes and exotic foreign scenes, Scottish art has been popular with royal collectors since George III. More than 80 works from the Royal Collection illustrate the history of the relationship between the royal family, with their residences in Balmoral and Holyroodhouse, and Scottish artists. On display are two of Sir David Wilkie's most famous pieces, *Blind-Man's Buff* and *The Penny Wedding*, both of which were commissioned by the Prince Regent (the future George IV); William Dyce's Italianate *The Madonna and Child,* 1845 (shown left), purchased by Prince Albert who went on to commission a companion piece; and David Roberts' travel scenes.
**The Queen's Gallery, Buckingham Palace**
+44 (0) 20 7766 7300
(www.royalcollection.org.uk)
From 18 March to 9 October 2016.

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***In the Age of Giorgione***
Using Giorgione (1478-1510) as a focal point, this exhibition presents an overview of the Venetian Renaissance with some 50 works. Through portraits, landscapes, devotional works and allegorical images, it examines Bellini's introduction of a new naturalism adopted by Giorgione and Titian. Few works can confidently be attributed to Giorgione, about whose life little is known and this issue of attribution is also explored in the exhibition. On display are works by Sebastiano del Piombo, Lorenzo Lotto and Tullio Lombardo, whose *Bacchus and Ariadne,* 1520-25, is shown below, as well as by Albrecht Dürer, who made an impact during his stay in Venice from 1505-6. All help to give an insight into the 16th-century Venetian art scene.
**Royal Academy of Arts**
+44 (0)20 7300 8000
(www.royalacademy.org.uk)
From 12 March to 5 June 2016.

***Artist and Empire***
Around 200 works from public and private collections across Britain examine how the British Empire influenced both the creation and collection of art. *Mahadaji Sindhia entertaining a British naval officer and military officer with a Nautch*, Anonymous Delhi School, *circa* 1815-20 (above) may seem typical, but the exhibition also includes

© RMN-GRAND PALAIS (MUSÉE D'ORSAY) / HERVÉ LEWANDOWSKI

KUNSTHISTORISCHES MUSEUM, VIENNA. PHOTO © KHM-MUSEUMSVERBAND

© GALLERIA DEGLI UFFIZI, FLORENCE, 2015.
PHOTO: SCALA, FLORENCE - COURTESY OF THE MINISTERO BENI E ATT. CULTURA

Maori artefacts and examples of Aboriginal art, both of which had long been held in disregard, along with paintings by George Stubbs, Anthony Van Dyck, Johann Zoffany and Lady Butler.
**Tate Britain**
+44 (0)20 7887 8888
(tate.org.uk)
Until 10 April 2016.

***Botticelli Reimagined***
The largest exhibition of Botticelli's work in Britain since 1930 has collected 150 works to show how artists and designers, from the 19th century onwards, have interacted with the Florentine artist. More than 50 works by Botticelli (1445-1510), including *Pallas and the Centaur*, *circa* 1482 (shown above) are accompanied by photographs, tapestries, sculptures, prints and paintings by artists from Dante Gabriel Rossetti and Edward Burne-Jones to René Magritte, Andy Warhol and David LaChapelle.
**Victoria & Albert Museum**
+44 (0)20 7942 2000
(www.vam.ac.uk)
From 5 March to 3 July 2016.

## NEWCASTLE UPON TYNE
***The Extraordinary Gertrude Bell***
The life of Gertrude Margaret Lowthian Bell (1868-1926) and her accomplishments in exploration, politics, diplomacy and archaeology in the Middle East are all celebrated in this exhibition, which presents material from the Gertrude Bell Archive held at Newcastle University, with loans from other collections including the British Museum and the Imperial War Museum.
(For more on the life of the intrepid Bell and her legacy, see pages 20-25.)
**Great North Museum**
+44 (0)191 208 6765
(greatnorthmuseum.org.uk)
Until 3 May 2016.

## NOTTINGHAM
***David Jones: Vision and Memory***
More than 80 works including woodcuts, engravings, paintings and drawings, show the diverse range of talents of the 20th-century British artist (and poet) David Jones. Of particular interest are his drawings produced between 1915 and 1917 when he served with the Royal Welch Fusiliers in the trenches of the First World War. Shown below is *Lourdes,* 1928, some of his other paintings explore Welsh mythology, while his copperplate engravings are shown in a 1929 edition of Coleridge's *The Rime of the Ancient Mariner*.
**Djangoly Gallery, Nottingham Lakeside Arts**
+44 (0)115 846 7777
(www.lakesidearts.org.uk)
From 12 March to 5 June 2016.

## OXFORD
***Andy Warhol: Works from the Hall Collection***
Over 100 works spanning the whole of Andy Warhol's career will be on public display for the first time in this exhibition, featuring some of the artist's less well-known work. The paintings, sculptures, screen prints and drawings from the private collection include Warhol's *Flowers* and *Brillo Soap Pads Box* series, portraits and political and religious works. These are shown alongside some of his films, such as *Sleep,* 1963, which is on loan from The Andy Warhol Museum in Pittsburgh.
**Ashmolean Museum**
+44 (0)1865 278000
(www.ashmolean.org)
Until 15 May 2016.

## PERTH
***Cradle of Scotland***
The three millennia-long history of Forteviot in Strathearn, Perthshire, which was once home to a Pictish royal palace and an astounding ancient ceremonial complex, has been investigated by the University of Glasgow's Strathearn Environs and Royal Forteviot Project for a decade. Now the results of the excavations and information concerning the evolution of the kingdom of Alba – from a set of prehistoric communities – are presented in this exhibition, with a 3D model of Constantine's Cross, a reconstruction of a burial pit at Forteviot near Perth, and a dagger with gold decoration, dating from 2100 BC-1950 BC found at the site.
**Perth Museum and Art Gallery**
+44 (0)1738 632488
(www.pkc.gov.uk/museums)
Until 26 June 2016.

© TRUSTEES OF THE DAVID JONES ESTATE

## SHREWSBURY, Shropshire
***Valhalla: Life and Death in Viking Britain***
The intriguing discoveries from Viking burials presented in this exhibition offersan overview of life and, more significantly, death in Britain 1000 years ago. Everyday objects found in graves in York and Shropshire provide insights into how people lived here, while evidence of boat burials and carved headstones show how the dead were treated. The highlights include two Viking skeletons recently found in York.
**Shrewsbury Museum and Art Gallery**
+44 (0)1743 258885
(www.shrewsburymuseum.org.uk)
Until 5 June 2016.

## WOKING, Surrey
***John Constable: Observing the Weather***
Born and brought up under the huge skyscapes of East Anglia it is little wonder that John Constable (1776-1837) had a great interest in natural phenomena – the changing weather and the dramatic effect that the light had on the appearance of a landscape; he made many studies of clouds, for example. This show examines how the artist scientifically observed and recorded weather patterns in his pen-and-ink studies, his lucid watercolours and his famous oil paintings.
**The Lightbox**
+44 (0)1483 737800
(www.thelightbox.org.uk)
Until 8 May 2016.

# UNITED STATES OF AMERICA

## LOS ANGELES, California
***Woven Gold: Tapestries of Louis XIV***
One of the greatest collections of tapestries in the world was amassed by Louis XIV (*r* 1643-1715). The Sun King liked to display his wealth ostentatiously as a sign of both his refinement and high status. The tapestries were skilfully woven by hand with wool, silk and threads wrapped in precious metals according to designs by Raphael, Rubens and Charles Le Brun. Some 15 spectacular tapestries, mainly on loan from France's Mobilier National, are on display along with preparatory drawings, prints and a cartoon. Among the highlights is *The Entry of Alexander into Babylon* (shown above right), woven by artists at the Gobelins workshop between 1665 and 1676, part of a five-part series designed by Le Brun to extol Louis XIV.
**Getty Center**
+1 310 440 7300
(www.getty.edu)
Until 1 May 2016.

© LE MOBILIER NATIONAL. PHOTO BY LAWRENCE PERQUIS

***Traversing the Globe through Illuminated Manuscripts***
Sumptuous illuminated manuscripts and painted books, dating from the 9th to the 17th centuries, offer an insight into the cultural exchange between distant lands during the Middle Ages and Renaissance.
The images depict imaginary places, as well as the known topographies of Europe, Africa, Asia and the Americas, revealing different outlooks on ideas of exploration, exoticism, communication, art and belief.
**Getty Center**
+1 310 440 7300
(www.getty.edu)
Until 26 June 2016.

***Roman Mosaics across the Empire***
Largely drawn from the Getty's own collection, the mosaics on show come from Rome and her provinces in North Africa, Gaul and Syria. With their geometric designs, colour and figurative imagery, depicting the natural world, myths, scenes from the arena and from daily life, they transformed the homes of their wealthy patrons as well as exhibiting their wealth and cultural aspirations.
**Getty Villa**
+1 310 440 7300
(www.getty.edu)
From 30 March to 12 September 2016.

## NEW YORK, New York

***Vigée Le Brun: Woman Artist in Revolutionary France***
The career of the self-taught portraitist Elisabeth Louise Vigée Le Brun (1755-1842), much loved by Louis XVI and Marie Antoinette, whose portrait she famously painted, is explored through 80 of her paintings and pastels. As a result of her links with the *Ancien Régime*, she was exiled from France between 1789 and 1805, during which time she became a member of Rome's Accademia di San Luca while still exhibiting in the Paris salons. Travelling around Florence, Naples, St Petersburg, Berlin and Vienna, she continued to be in high demand as a portraitist of the elite, painting the Queen of Naples and her family, Louis XVI's aunts, and relatives of Catherine the Great of Russia.
**Metropolitan Museum of Art**
+1 20 27 37 45 15
(www.metmuseum.org)
Until 15 May 2016.

***The Power of Prints: The Legacy of William M Ivins and A Hyatt Mayor***
Marking the centennial of the Met's Department of Prints, this exhibition looks at the extraordinary collection of thousands of prints amassed by the Department's founding curator William M Ivins (1881-1961) and his protégé A Hyatt Mayor (1901-1980), and their legacy. They devised this collection to be an encyclopaedic body of work, including everyday prints. The selection on show are by Mantegna, Dürer, Rembrandt, Goya, Whistler, Toulouse-Lautrec, Mary Cassatt and Edward Hopper, among many other artists.
**Metropolitan Museum of Art**
+1 20 27 37 45 15
(www.metmuseum.org)
Until 22 May 2016.

***Encountering Vishnu: The Lion Avatar in Indian Temple Drama***
The Met's recent acquisition of five rare Indian wooden masks form the focus of this exhibition. These masks, worn by actors in plays performed during religious festivals in southern India, are from a less well-documented area of the country's late medieval devotional art. Sculptures in bronze, sandstone and wood, miniatures, lithographs and photographs, ranging in date from the 6th to the 20th centuries, shown alongside the five wooden masks, explore the different guises of Vishnu, most importantly his Narasimha, or lion avatar, as he appears in the temple drama *Hiranyanatakam*, performed in parts of southern India.
**Metropolitan Museum of Art**
+1 20 27 37 45 15
(www.metmuseum.org)
Until 5 June 2016.

© IMAGE COURTESY SMITHSONIAN'S DIGITALIZATION PROGRAM

***The Discovery of King Tut***
This detailed reconstruction of the tomb of Tutankhamen features more than 1000 replicas made by using the expertise of Egyptian craftsmen and the knowledge of Egyptologists. It allows visitors to see this extraordinary monument through the eyes of the man who discovered it, Howard Carter, in 1922. The tomb was largely intact when the archaeologist found it, and this exact reconstruction shows the chambers with their finely painted walls as they would have been when the beautiful boy-king Tutankhamen was interred there over 3000 years ago, as well as all the treasures buried with him.
**Premier Exhibitions at 5th Avenue**
+1 888 647 2789
(www.tutnyc.com)
Until 1 May 2016.

## WASHINGTON DC

***Power and Pathos: Bronze Sculpture of the Hellenistic World***
After sojourns at Florence's Palazzo Strozzi and the J Paul Getty Museum in Los Angeles, this touring landmark exhibition of 50 exceptionally rare Hellenistic bronzes has arrived in Washington. The sculptures have been brought together from several European, American and African institutions and are among the finest surviving examples. Bronze is a material suitable for innovation and reproduction, and for expressing fine detail. With eyelashes and lips of copper and eyes of stone or coloured glass, these sculptures are celebrated for their realism.
**National Gallery of Art**
+1 20 27 37 42 157 15
(www.nga.gov)
Until 20 March 2016.

***Heart of an Empire: Herzfeld's Discovery of Pasargadae***
The ancient city of Pasargadae in southwest Iran, constructed by Cyrus the Great as the first capital of the Persian Achaemenid Empire, was excavated by German archaeologist Ernst Herzfeld (1879-1948) several times during the early 20th century. He produced the first map of the site and identified its main structures. His drawings, notes and photographs of Pasargadae from the collection (one of the largest in the world) of the Freer/Sackler archives, bring this ancient site – and the final-resting place of Cyrus – back to life.
Arthur M Sackler Gallery,
**Smithsonian Institute**
+1 202 633 1000
(asia.si.edu)
Until 31 July 2016.

***Body of Devotion: The Cosmic Buddha in 3D***
The 6th-century Chinese life-size figure of Vairochana (the Cosmic Buddha), in the Smithsonian's collection of Asian art, is rather remarkable. On this limestone Cosmic Buddha's deceptively simple monk's robe are depicted detailed scenes from the historical Buddha's life and also a symbolic map of the Buddhist world. The interactive installation *Body of Devotion* looks at the laser scans and 3D modelling (shown above), which reveal new details about the sculpture and allow researchers across the globe to study it more closely. Here we see how these advanced technological methods of researching sculpture have evolved from rubbings and photographs.
**Arthur M Sackler Gallery, Smithsonian Institute**
+1 202 633 1000
(asia.si.edu)
Until December 2016.

# AUSTRALIA

## MELBOURNE

***Andy Warhol/Ai Weiwei***
This show is a collaboration between the National Gallery of Victoria, the Andy Warhol Museum and Ai Weiwei. The latter's work, including some major new commissions, is displayed alongside that of Andy Warhol in a survey of both artists' careers and their impact. More than 300 works show the main points of comparison and differences between the two artists and explore their interpretations of

themes, such as life on film, celebrity and social media, the individual and the state, and icons and iconoclasm.
**National Gallery of Victoria International**
+61 (0)3 8620 2222
(www.ngv.vic.gov.au)
Until 24 April 2016.

***Blue: Alchemy of a Colour***
This exploration of the beautiful blues created by cobalt pigment and indigo dye shows how artists from different countries and traditions have used blue to produce stunningly diverse works. Drawing from the NGV's Asian Art Collection, this exhibition presents paintings, Japanese woodblock prints, ceramics from Persia, China, Japan and Vietnam, and indigo-dyed textiles from Asia, as well as a few pieces from Egypt, Italy and England.
**National Gallery of Victoria International**
+61 (0)3 8620 2222
(www.ngv.vic.gov.au)
Until 20 March 2016.

## FRANCE

### PARIS

***Jardins d'Orient***
The history of Oriental gardens from antiquity to the present day is explored in this show of 300 artworks, scale models and technical devices sourced from the Iberian Peninsula to the Indian subcontinent. They explore the relationship between Eastern and Western gardens and the balance between nature and environmental sustainability in modern metropolises. In a playful interpretation of an ancient tradition, the landscape architect and '*anamorphiste*' François Abelanet has turned the square alongside the Institut du Monde Arabe into an Oriental garden with palms, orange trees and jasmine.
**Institut du Monde Arabe**
+ 33 (0)1 40 51 38 38
(www.imarabe.org)
From 19 April until 25 September 2016.

## GERMANY

### BERLIN

***Death in Naples: The 125th Anniversary of the Death of Heinrich Schliemann***
After his death in Naples on 26 December 1890, the body of Heinrich Schliemann was taken from Italy and buried in a fine Neo-Classical tomb (shown above) designed by his friend Ernst Ziller in Athens' First Cemetery. His funeral was attended by large crowds, and now, 125 years later, his life is being honoured again in this exhibition. Herr Schliemann was a multi-millionaire businessman, globetrotter, collector and patron, but, above all, he was the archaeologist who discovered Troy. Trojan artefacts as well as some from his excavations at Mycenae, Tiryns and Orchomenos are displayed together for the first time in 19th-century-style cases. Also on show are vessels he brought from Egypt, and rare archive material.
**Neues Museum**
+ 49 30 266 42 42 42
(www.smb.museum/)
Until 30 June 2016.

## ISRAEL

### JERUSALEM

***Hadrian: An Emperor Cast in Bronze***
Hadrian, the emperor who thwarted the Bar Kokhba revolt, annihilated the Judean population and turned Judea into Syria Palaestina, last visited Jerusalem in AD 130. Now, three bronze portraits of the emperor (shown below) found scattered across the empire, have been brought together to highlight the differences between them and to show the many dimensions of Hadrian's character. The Israel Museum's own bronze portrait of Hadrian, discovered in the camp of the Sixth Roman Legion in Tel Shalem near Beit Shean, will be shown alongside one from the British Museum, found in the River Thames in 1834 and another, originally from Egypt or Asia Minor, on loan from the Louvre.
**Israel Museum**
+972 2 670 8811
(www.imj.org.il)
Until 30 June 2016.

***Pharaoh in Canaan: The Untold Story***
More than 680 objects reveal the relationship between Egypt and neighbouring Canaan in the second millennium BC. Vast royal victory steles, coffins, scarabs and amulets found in Israel and Egypt show that there were both cultural and ritual exchanges between these two ancient lands. As well as artefacts from the Israel Museum's own collection, the exhibition has significant loans from the Metropolitan Musuem of Art, the Louvre and Turin's famed Egyptian Museum.
**Israel Museum**
+972 2 670 8811
(www.imj.org.il)
From 4 March to 25 October 2016.

ELIE POSNER ©THE ISRAEL MUSEUM, JERUSALEM

## ITALY

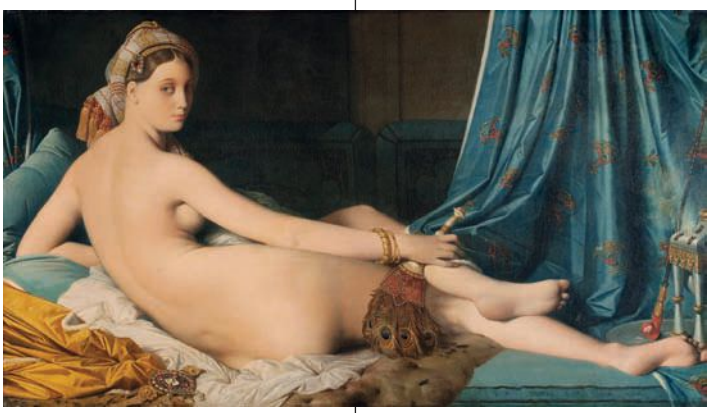
### CONGELIANO, Treviso

***I Vivarini: The Splendour of Painting from International Gothic to Renaissance***
In the first exhibition dedicated to the 15th-century Vivarini family of artists from the island of Murano, painted panels, altarpieces and polyptychs all serve to tell the story of the transition from Gothic to Renaissance Venetian art. Antonio, Bartolomeo and Alvise Vivarini rivalled the Bellini family, also from Venice, in their artistic output, and their status and their interactions with other early Renaissance painters in Italy, such as Mantegna and Filippo Lippi, feature in this exhibition. Highlights include the numerous panels painted by Antonio and his brother-in-law Giovanni d'Alemagna (about whom little is known), which depict Saint Monica and Saint Apollonia and show a mix of Gothic and Renaissance features and the influence of Classical antiquity.
**Palazzo Sarcinelli**
+39 0438 1932123
(www.mostravivarini.it)
Until 5 June 2016.

## NETHERLANDS

### OTTERLO

***Barbara Hepworth: Sculpture for a Modern World***
Following its showing at Tate Britain last year, this Barbara Hepworth (1903-1975) retrospective explores how the innovative sculptor interpreted shapes and forms found in nature and crafted both figurative and abstract works from wood, marble and bronze. Paintings, drawings, film and photographs of Hepworth all help to tell the story of her artistic career. The display of her work extends into the museum's sculpture garden where some of its own collection of Hepworth's bronzes are on view.
**Kröller-Müller Museum**
+31 318 591 241
(krollermuller.nl)
Until 17 April 2016.



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## SPAIN

### MADRID

***Ingres***
Amazingly the celebrated French painter Ingres (1780-1867) is having his first retrospective in Spain (none of his work is in a public collection there). Some 70 paintings – from the Louvre, Musée Ingres in Montauban and other collections – will be on show, including his exquisite *Grande Odalisque,* 1814 (shown above) and a magnificent portrait of Napoleon I on his Imperial throne. Works Ingres produced in Rome, such as *Virgil reading the Aeneid to Augustus*, show how he engaged with the Classics.
**Museo Nacional del Prado**
+34 913 30 28 00
(www.museodelprado.es)
Until 27 March 2016.

## UNITED KINGDOM

### CARDIFF

***Women in Archaeology***
Some of the most significant early developments in archaeology were made by women. Today it is steadily becoming an increasingly female profession, and it is expected that during the next 10 years women will make up the majority of the archaeological workforce. Held on International Women's Day, this free talk, given by Professor Sue Hamilton from University College London, complements the museum's latest exhibition *Treasures: Adventures in Archaeology* (for further details see page 56).
8 March 2016, 14.00-16.00
**National Museum of Wales**
(www.museumwales.ac.uk)

### LONDON

***Queering Classical Art***
The 2016 Rumble Fund Lecture in Classical Art will be given by Whitney Davis, Pardee Professor of History & Theory of Ancient & Modern Art at the University of California at Berkeley, who has written extensively on prehistoric, ancient and homosexual visual culture, including his recent books *Queer Beauty: Sexuality and Aesthetics from Winckelmann to Freud and Beyond.*
Wednesday 16 March 2016, 18.30
**King's College London**
(thirdannualrumblefundlecture.eventbrite.co.uk)

***London Roman Art Seminar***
Supported by the Institute of Classical Studies, Royal Holloway University of London, King's College London

***Looking like Caesar. A case-study of assimilation in late Republican portraiture***
**Nigel Spivey**
**(Emmanuel College, Cambridge)**
Monday 7 March 2016

***Hercules Ovidianus in Augustan Rome: between literature and figurative repertory***
**Isabella Colpo**
**(Università degli Studi di Padova)**
Monday 21 March 2016

**Revixit ars*: art's rebirth and archaising practices in Greco-Roman antiquity, late imperial China and early modern Europe***
**Jeremy Tanner**
**(University College London)**
Monday 25 April 2016
All seminars are held at 17.30 in Room 243, South Block of Senate House, University of London, Malet Street, London WC1E 7HU
(www.icls.sas.ac.uk/)

## ST ANDREWS

### RoMEC XVIIII: Cavalry in the Roman World

The 19th meeting of the Roman Military Equipment Conference (and the first to be held in Scotland) will explore all aspects of the military use of horses and associated equipment design in the Roman world in its broadest sense. One session of papers will closely examine Hadrian's cavalry, while others will look at cavalry traditions outside Rome in areas such as North Africa, Mesopotamia, Iran and Iron Age Europe. Open to all interested parties, the conference will also include re-enactment displays and excursions to Roman military sites on the Antonine Wall, the National Museum of Scotland (Edinburgh) and the University Museum (Glasgow).

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**From 6 to 11 June 2016**
**School of Classics**
**University of St Andrews**
**(Visit www.st-andrews.ac.uk/classics/events/conferences/2015-2016/romecxviiii)**

***The Evidence of Images: Bosch, Beckmann, Kentridge***
Joseph Koerner, Victor S Thomas Professor of the History of Art and Architecture, Harvard University, will give three lectures on the work of Hieronymus Bosch, Max Beckmann and William Kentridge for the EH Gombrich Lecture Series on the Classical Tradition.
Tuesday 15 March 2016
16.00-17.00 Hieronymus Bosch
17.30-18.30 Max Beckmann
Thursday 17 March 2016
17.30-18.30 William Kentridge
**Warburg Institute**
(warburg.sas.ac.uk)

### NOTTINGHAM

***David Jones: Vision and Memory***
To accompany the exhibition (see page 58), its co-curator and Jones' biographer Ariane Bankes will give a lecture on this highly individual and spiritual artist's work.
Friday 11 March 2016, 18.00-19.00
**Djanogly Gallery Lecture Theatre**
(www.lakesidearts.org.uk)

### OXFORD

Day and weekend courses in archaeology
***1066 and All That***
To be held at Newbury College
Saturday 5 March 2016
***A Practical Introduction to Ancient Egyptian Hieroglyphs***
Saturday 9–Sunday 10 April 2016
***Australian Rock Art and the Dreamtime***
Saturday 16 April 2016
**Department for Continuing Education, University of Oxford**
(www.conted.ox.ac.uk)

### ST IVES, Cornwall

***Hepworth LIVE! – 40th Anniversary Celebration***
Violinist Philippa Mo, poet Rupert Loydell and the artist "Linder" come together for this special evening at Hepworth's former home and studio to commemorate the anniversary of the sculptor's death and her interest in the performing arts.
9 April 2016, 18.00-21.00
**Barbara Hepworth Museum and Sculpture Garden**
(tate.org.uk)

## VARIOUS LOCATIONS

***Lysistrata***
Actors of Dionysus are touring with their Absurdist production of Aristophanes' comedy in which the women of Greece withhold sex to try and persuade their husbands to end the Peloponnesian War.
**Roses Theatre, Tewkesbury**
1 March, 19.30
**The Broadway, Barking**
2 March, 19.30
**Theatre Royal, Winchester**
3 & 4 March, 19.30
**Roedean School, Brighton**
5 March, 19.30
**New Theatre Royal, Portsmouth**
7 & 8 March, 19.30
**Sandpit Theatre, St Albans**
9 March, 19.30
**Edge Hill University, Ormskirk**
10 March, 19.30
**Wickersley School, Rotherham**
11 March, 19.30
**The Old Town Hall, Hemel Hempstead**
12 March 19.30
**Theatre Royal, Margate**
14 March, 19.30
**Arena Theatre, Wolverhampton**
15 March, 19.30
16 March, 13.00 and 19.30
**Guildhall Arts Centre, Grantham**
17 March, 19.30
**Brewhouse Theatre, Burton on Trent**
18 March, 19.30
**St Francis Xavier College, Clapham, London**
21 March, 19.30
**Millfield Theatre, London**
22 March, 13.15 and 19.45
**The Castle, Wellingborough**
23 March, 19.30
**Courtyard Theatre, Hereford**
24 March, 19.30
(www.actorsofdionysus.com)

### YORK

***The Staffordshire Hoard: Six Years on***
Kevin Leahy, the Portable Antiquities Scheme's National Adviser on Early Medieval Metalwork, will give a lecture on the Staffordshire Hoard.
31 March 2016
**The Bar Convent**
(www.bar-convent.org.uk)

***Finds from Roman York, Brigantia and Beyond***
Organised by the Roman Finds Group, this major conference will include a keynote speech delivered by author Lindsey Davis and also a reception at the Yorkshire Museum.
1 to 2 April 2016
**Kings Manor, Department of Archaeology, University of York**
(www.romanfindsgroup.org.uk)

## UNITED STATES OF AMERICA

### WASHINGTON

***The Thief Who Stole My Heart: The Material Life of Sacred Bronzes in Chola India*, circa 850-1280**
Vidya Dehejia, Barbara Stoler Miller Professor of Indian and South Asian Art at Columbia University, will give the 65th annual AW Mellon Lectures in the Fine Arts on bronze temple structures from the southern Indian Chola dynasty. The lectures cover the role of the bronzes as divine images and their wider role in socio-economic practices. The Smithsonian's Freer Gallery of Art and Arthur M Sackler Gallery will also exhibit three Chola bronzes from March 2016.
Sundays from 3 April to 8 May 2016, 14.00
**National Gallery of Art**
(www.nga.gov)

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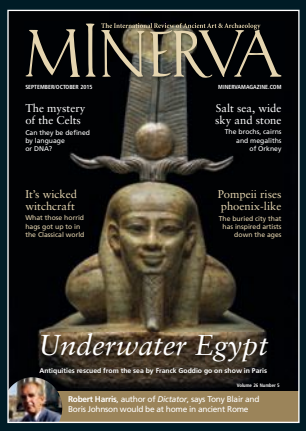


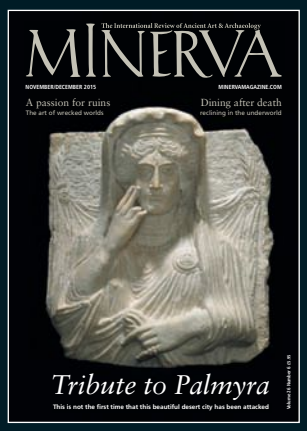


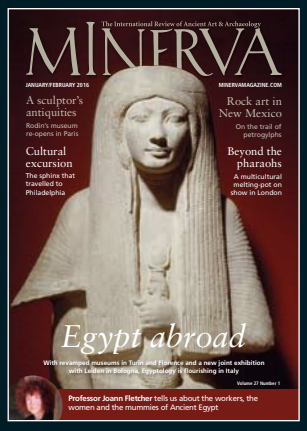


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