

# Oxford Thinking

*Ideas that change the world*



## UNIVERSITY PARKS

RIVER CHERWELL

OFFICIAL OPENING OF THE  
BLAVATNIK SCHOOL OF  
GOVERNMENT



ENABLING  
CUTTING-EDGE  
MICROSCOPY AT  
THE DEPARTMENT  
OF MATERIALS



VOYAGES OF DISCOVERY AT  
THE PETER RIVERS MUSEUM



CONNECTING WITH  
THE PAST AT THE  
ASHMOLLEAN MUSEUM



MAGNIFICENT MAPS AT  
THE WESTON LIBRARY



A LEGACY FOR  
LEARNING AT THE  
FACULTY OF LAW

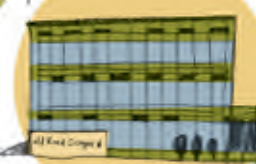


INSPIRING APPRECIATION  
OF SPANISH AMERICAN  
CULTURE AT OXFORD



*The Campaign for the University of Oxford*

## CAMPAIGN REPORT 2015/2016



TACKLING DISEASE ON A GLOBAL  
SCALE AT THE OLD ROAD CAMPUS,  
AND BEYOND

# Thanks to your support this year...



## *... Earth Sciences undergraduates can carry out mapping projects*

Independent fieldwork is a core feature of the Earth Sciences undergraduate course at Oxford. A reduction in funding has threatened the department's ability to provide support for students to undertake this important activity.

The Department of Earth Sciences became the first academic department to conduct a telethon campaign to secure the future of the mapping project, which is vital to the development of key skills. Almost half of those called pledged their support.

'The support we received, particularly from our younger alumni, underlines how greatly the fieldwork component of the undergraduate course is valued. The opportunity to ensure that current and future students are also able to benefit from this experience resonated with many donors who spoke with our student callers.'

*Professor Gideon Henderson,  
Head of Department, Earth Sciences*



## *... six Classics graduate scholarships have been created*

Classics alumni and friends have risen to the challenge of helping the faculty to raise vital funds in support of graduate scholarships. Only 12–15 scholarships are currently funded in Classics, and an ambitious plan to double that number over the next ten years was unveiled in 2015. Last year, six new full graduate scholarships were created for students starting their studies in 2016.

'I am delighted with this response to our appeal. Oxford's world-leading faculty and exceptional libraries and museums make it a unique and life-changing place to study the classical world. Every year, however, lack of funding forces potential students to turn down places on graduate courses. The support of our alumni and friends has given us a major boost towards our goal of doubling graduate scholarships and enabling some of the best students in the world to study here.'

*Professor Teresa Morgan,  
Head of Classics Faculty*



## *... work on the new sports centre at Iffley Road is underway*

A new £8.5 million sports centre is under construction thanks to the collective generosity of hundreds of donors, comprising alumni and friends of the University. The new facility will house a four-court sports hall and a multi-purpose activity room, and is due for completion by October 2017.

The sports hall will be named after Oxford cox Dr Acer Nethercott, Olympic silver medallist, three-time Boat Race winner and outstanding scholar, who sadly passed away in 2013 aged just 35.

'Whilst the University of Oxford has long been synonymous with sporting excellence, our ageing indoor facilities are no longer able to meet the needs of many of our students or sports clubs. We are therefore immensely grateful to everyone who has supported this first phase of our full master plan to redevelop the entire Iffley Road site, thereby enabling us to continue nurturing and supporting future generations of scholar-athletes.'

*Jon Roycroft,  
Director of Sport*



**A**cross the University and the colleges, this has been one of the most successful years for the Oxford Thinking Campaign. The generosity of our donors is ensuring that Oxford can deliver teaching and research of the very highest quality, underpinning our mission to advance academic excellence for the betterment of the world.

The Campaign Report for 2015/16 showcases a cross section of stories from around the University where philanthropy is playing an important part. The scope of the work made possible through donations is remarkable – from rainforest ecology and the development of life-saving vaccines to the conservation and exhibition of global treasures, and so much more. Your donations are making a tangible difference.

It is because of our benefactors that Oxford is so perfectly positioned to provide the vital insights and make the life-changing discoveries that have such a profound impact upon so many people. I hope you enjoy the report.

Thank you for your support.

**Liesl Elder**  
Director of Development  
University of Oxford Development Office

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Please visit [www.campaign.ox.ac.uk/report2015-16](http://www.campaign.ox.ac.uk/report2015-16) to find additional campaign report features



# Understanding the future of the rainforest

Over the course of his academic career, Professor Yadvinder Malhi has been to places around the world that some of us could only ever dream of visiting. 'To give you a quick snapshot,' he says, 'I started my tropical research in the Amazon. I focused on Brazil for several years, but then after that I started working in Peru, going from the lowland Amazon up through the slopes of the Andes, and into Bolivia in the dry forests. In the last few years I've been working more in Africa, with a particular emphasis on Ghana, Gabon and Ethiopia, as well as on Borneo in Asia...' The list continues.

*'I feel immensely lucky to work on something that provides enormous personal satisfaction, while also, hopefully, contributing to the welfare of the planet.'*

*Professor Yadvinder Malhi*

As Professor of Ecosystem Science at the School of Geography and the Environment, and Programme Leader in Ecosystems at the Environmental Change Institute, Yadvinder Malhi is used to travelling for work. His research focuses on the way in which ecosystems are responding to contemporary global change, from climate change through to logging, degradation, hunting and other forms of direct human use. 'I'm interested in terrestrial ecosystems worldwide,' he explains, 'although I'm particularly interested in forests, and within

that there's a focus on tropical rainforests – we work in all the major tropical regions.'

Tropical ecosystems play an important role in the Earth's water and carbon cycles, significantly influencing what Professor Malhi describes as 'the global climate system.' Despite this, and the fact that more than half of the planet's biodiversity is found in tropical rainforests, they're often understudied when compared with other regions.

Around a decade ago, in order to help him understand the function and traits of these forest ecosystems, Professor Malhi established the Global Ecosystem Monitoring network (GEM). There are now in excess of 80 GEM plots operating in the tropics.

'We've really pioneered things in terms of not just taking a snapshot, but monitoring these forests over time,' he explains. Thanks to a dedicated team of researchers – local collaborators and Professor Malhi's own research staff and students – there is now an almost continuous global operation in place, so that 'at each of these sites, on almost the same day, measurements of the same things are being taken, to the same protocol.'


By looking at the rates of litter and root production, and the amount of CO<sub>2</sub> passing through the stems, soil and leaves, each GEM team is able to describe the entire cycling of carbon, nutrients and energy through the forest they monitor. This data has given Professor Malhi a new understanding of the way that forests differ from one another, as well as how they respond to extreme weather events.



Professor Malhi's attention is currently focused on the strong El Niño event that increased global temperatures by around 1°C last year, and resulted in severe drought in many parts of the tropics. 'We're uniquely positioned to track these forests through these droughts, and then for several years afterwards,' he says. 'In fact we've just been awarded a research grant to specifically analyse the impacts of this event on the GEM network.'

For Professor Malhi though, the bigger, longer-term question is to understand the sensitivity of the biosphere to global climate change. Forests currently absorb around a quarter of the CO<sub>2</sub> contained within human fossil fuel emissions. 'If the forests weren't absorbing this CO<sub>2</sub>,' Professor Malhi says, 'the rate of global warming would be around 20–30% faster than it is currently. So they're playing a substantial role in slowing down the rate of global warming.'

One major uncertainty, however, is around how long this will last. 'Is there a danger', he asks, 'that with sufficient warming or

A photograph of Professor Yaduvinder Malhi, a man with glasses and a dark t-shirt, looking upwards and holding a branch of a tree in a lush green forest. The background is filled with dense foliage and sunlight filtering through the leaves.

*‘We estimate that about a third to half of the University’s energy-related carbon emissions are absorbed by Wytham Woods.’*

*Professor Yaduvinder Malhi*

with sufficient droughts, this absorption of CO<sub>2</sub> will actually become a release of CO<sub>2</sub> from the forest? So that this “brake” on climate change could become an accelerator of climate change? An important clue is that during El Niño events, forests stop absorbing CO<sub>2</sub> entirely. ‘We see this on a global scale,’ states Professor Malhi, who is hoping to use GEM to understand why.

The discoveries made by his team will be key to informing our response to climate change. Last year’s Paris Agreement specified that any change would need to be limited to below 2°C of total warming. However, as Professor Malhi points out, ‘all of these calculations are based on what the biosphere has been doing until now. If forests stop absorbing carbon dioxide, then for the same amount of CO<sub>2</sub> you get more warming – and so we have less leeway in how much more CO<sub>2</sub> we are able to emit before we hit dangerous levels of global warming.’ The forests’ reaction will ultimately determine how tight the coming climate change bottleneck will be.

Although he will continue to investigate the immediate impact of the El Niño event, Professor Malhi’s ultimate aim is to leave a legacy of long-term ecological monitoring across the globe: ‘I’d like for these forests to act as “canaries in a mine”; as early warning systems, so that we’re able to spot any changes happening in the biosphere much earlier. Our challenge now is to find the funding that secures this monitoring for decades to come.’

Oxford’s Wytham Woods play a pivotal role in this vision. Owned by the University for over 70 years, this temperate woodland has become an important research facility for Professor Malhi’s team. Within the forest, a wooden walkway enables researchers to access the canopy leaves, and treetop sensors allow it to act as a key calibration point for satellites measuring forest biology, chemistry and function. ‘You only need a few of these calibration points across the world’, Professor Malhi explains, ‘in order

to produce a coherent map of the carbon cycle of the entire planet.’

Thanks to the woodland’s protected status, and the University’s active ecological research programme, Wytham has the potential to provide valuable climate data for the long term. In order to say the same for GEM’s tropical plots, however, Professor Malhi believes the key lies in building global scientific capacity, and ensuring that a network of talented students and researchers has the skills to inform international policy and practice. ‘And you know that as they develop,’ he concludes, ‘we’ll keep working with them, and collaborating with them for the rest of their lives – and that’s the brilliant thing.’

Professor Malhi’s global research is supported by, amongst others, The Gordon and Betty Moore Foundation. His post at Oriel College is supported by The Frank Jackson Foundation.



# Tackling disease on a global scale

Oxford is at the forefront of teaching and research to help combat diseases affecting populations worldwide. Through its world-leading Centre for Tropical Medicine and Global Health (CTMGH), the University is working to find practical solutions to the problems these diseases cause. The centre conducts its research overseas in Africa and Asia, and across two sites in Oxford.



**Professor Trudie Lang**  
*Director of The Global Health Network in Tropical Medicine, Nuffield Department of Medicine*

Professor Trudie Lang leads The Global Health Network, a platform that enables life-saving evidence to be generated in developing countries by supporting, guiding and training health workers in undertaking research. 'I think, more than many other universities, Oxford is much more *out there* than it is *here*,' she says.

The network, Professor Lang explains, focuses on 'trying to enable evidence to be generated in places of the world where

there's just not enough data.' In 2013, the World Health Organisation said that unless low-income countries became the generators and not the recipients of data, there would never be any real difference in maternal mortality rates. 'What tends to happen', she says, 'is that the overseas research is led by us – pharmaceutical companies and universities – and that's what needs to change.'

This became particularly evident in 2014, during the West African Ebola epidemic. Professor Lang and her colleagues at the CTMGH worked around the clock to set up a clinical trial to test whether novel antiviral brincidofovir could be effective against the disease. Although the trial

was successful, she believes that had the research capacity been in place, Oxford would not have needed to step in: 'Sure, we can support them from the background and be collaborative, but it should actually be them leading the charge.'

Through its three overseas tropical research programmes – located in Kenya, Thailand and Vietnam – the University works to underpin exactly that aim. Operating since the early nineties, the programmes are now fully embedded into local health services, and focus primarily on training the local staff they employ. 'They enrol in DPhil programmes, masters' programmes, research fellowships,' explains Professor Lang. 'It's all about inspiring generations of scientific leaders, which is working really, really well.'

Back in Oxford, the centre's role is 'more cross-cutting, concentrating on the teaching, the enabling and the methodology.' Included within this remit is the new graduate course in International Health and Tropical Medicine, a one-year programme that seeks to develop students' understanding of major global health problems in resource-limited settings.

Thanks to vital support provided by donors, students from all around the world are given the opportunity to enrol. 'It's fantastic,' says Professor Lang. 'They get the full Oxford experience, but we hope that when they graduate, they return to their home countries to apply what they have learned.'



*'I think the master's here was a master's in life actually; the people I've met have become like family to me. It's changed me as a person, and I know I'll never regret it.'*

Manar Marzouk



**Poojan Shrestha, Arcadia Weidenfeld-Hoffmann Scholar**  
*MSc in International Health and Tropical Medicine*

'Antimicrobial resistance is something I'm really passionate about,' says Poojan Shrestha, dentist turned clinical researcher from Kathmandu, Nepal. 'Even before coming to Oxford, I was working on it. I helped to set up a huge database in my hospital, to see how resistance was evolving there. So as soon as I saw that this topic was available, I dove straight in.'

Before applying for the master's, Poojan worked at Oxford University's Clinical Research Unit in Nepal as a research fellow. 'I realised how much of a burden infectious diseases were,' he recalls. 'It's a global problem but when you look at the number of deaths associated, it's much more of a problem for developing countries. And when these infections become resistant, that's a huge obstacle.'

As part of his studies, Poojan spent two months in Thailand with Oxford's Mathematical and Economic MODelling Group. 'I've been calculating the external cost of antibiotic resistance, looking not only at what you would pay at the

pharmacy, but at other elements such as the external cost of air pollution, for example. It's a very new approach – but very important,' he explains.

Poojan hopes to continue his research once the course has ended, but is also eyeing other opportunities. 'We want to try and figure out a way that we can all stay in touch and work together on future projects,' says Poojan, of his course-mates. 'We may be from 14 different countries, but there's so much cohesion in our group, and that in itself opens up really exciting possibilities.'



**Manar Marzouk, Eve Jones Memorial Scholar**  
*MSc in International Health and Tropical Medicine*

As a 15-year-old living in Syria, Manar Marzouk dreamt of a career working with Médecins Sans Frontières: 'I never thought I would stay in Syria. I wanted to travel around the world, to wherever there was a disaster, and help affected populations.' In order to fulfil her goal, Manar studied pharmacy at the University of Damascus, but the outbreak of war in 2011 caused her to rethink her plans.

Instead of travelling abroad, she remained in Syria, undertaking a number of humanitarian roles with the UN Refugee Agency (UNHCR), and later with UNICEF. It was only after being persuaded by a friend – an Oxford alumnus – that Manar decided to apply for the master's course in International Health: 'I sent the application and thought no-one would read it, but it happened!'

Manar is now undertaking research into the management of cancer care for Syrian refugees in Jordan, with a focus on the challenges facing healthcare workers and policy providers. 'There is very limited research done in this area,' she explains. 'I was seeing this on a daily basis in Syria. I was seeing patients with chronic and non-communicable diseases becoming more and more neglected.' The course, Manar reflects, has made her 'believe in the power of research to make change', and she hopes to continue working with displaced and refugee populations when she graduates.

For Manar, the Oxford experience has been transformative: 'I think the master's here was a master's in life actually; the people I've met have become like family to me. It's changed me as a person, and I know I'll never regret it.'



# Inspiring wider appreciation of Spanish American culture and heritage at Oxford

An Associate Professorship in Spanish American Literature has been endowed thanks to the generosity of anonymous benefactors

**I**t was the decision to return to her roots that led Dr María del Pilar Blanco away from an academic career in French and English literature, and down her current path: 'For me, it was a way to know more about the connections between where I'm from – Puerto Rico and the Caribbean – and the rest of Latin America. It allowed me a greater breadth of knowledge into the language that I use and take for granted.'

Dr Blanco was appointed Associate Professor in Spanish American Literature at Trinity College, Oxford in 2012. To undergraduates she teaches Spanish American literature from 1810 – the beginning of the Wars of Independence in Central and South America – to the present day, and with postgraduates she focuses on later 19th- to mid-20th-century Latin American literature and culture. 'I do cover a lot,' she says. 'It's a very popular area.'

Dr Blanco explains that although Spanish America is 'very relevant, politically, in the present moment', interest in the region's literary output has been on the rise since the 1950s. Authors like Gabriel García Márquez, Mario Vargas Llosa and Julio Cortázar 'revamped Latin American literature forever, in the eyes of the global reading public. The world couldn't get enough of them.'

This may have heralded a turning point in the appreciation and understanding of Spanish American culture worldwide, but Dr Blanco is keen for her students to think about what happened in 19th-century Latin America, before this 'so-called boom' occurred. She elaborates: 'I'm really interested in them seeing how Latin America was playing a big part in the

world, and that it wasn't this backwater region – it was participating in political conversations with the United States, with Europe. I want them to think about literature as part of this big global network of political and aesthetic activity.'

Inspiring students to think critically about a subject in this way is a key part of Oxford's celebrated tutorial system, which ensures that students have the opportunity to engage with, learn from and be challenged by world-class academics.

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*'Mexico is one of the great cultures of the world. When I go to a Mexican library I just revel in the possible lines of research I can pursue – I love it!'*

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*Dr María Blanco*

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'I pride myself in having produced a set of lectures and seminars for my students where they can learn from a vast expanse of literary history from Latin America,' Dr Blanco explains. 'I have introduced them to authors that they have never heard of, but who are, I think, as important as other authors that we always talk about.'

Dr Blanco's own research focuses on the emergence of popular science writing in Spanish American periodicals of the late 19th century, and she notes that there is often 'a nice rapport' between her own work and that of her graduate students: 'I'm hoping that I will have one or two students who will


become as interested as I am in the nitty-gritty work that I do, looking through newspapers and digging out interesting articles.'

While the pursuit of Dr Blanco's own research plays a crucial role in maintaining the University's position as a centre of excellence, it also highlights the effect that current economic conditions have had on the funding of the humanities. Thankfully, this is where philanthropy can help to lessen the burden. 'Oxford has guarded the humanities so well,' says Dr Blanco. 'A world university is one where you safeguard your languages, where you inculcate an interest in different cultures and in different literatures, and we have a responsibility to keep Oxford as one of the top places to do that.'

Now that her post has been endowed, Dr Blanco hopes that there will be a renewed focus on widening interest in Spanish American literature and culture at Oxford. This would, she explains, include developing more exchange programmes with Latin America, and establishing a 'much more prolonged connection' with Mexico, which is a country she focuses on substantially in her own work.

'Mexico is one of the great cultures of the world. When I go to a Mexican library I just revel in the possible lines of research I can pursue – I love it!' she says. Her hope is that one day her students will have the opportunity to share these experiences too: 'I think that by establishing connections with countries in Latin America, and showing them that we are interested in keeping alive meaningful conversations and collaborations, it will help us to develop in students a nuanced knowledge of what Latin America is all about.'



A woman with dark, wavy hair is sitting on a wooden chair in a library. She is wearing a teal long-sleeved top, a dark blue scarf, a teal skirt, black tights, and black boots. Her hands are clasped in her lap. The background is filled with tall wooden bookshelves packed with books. A wooden ladder is visible on the left side of the frame. The lighting is warm and focused on the woman.

*'I pride myself in having produced a set of lectures and seminars for my students where they can learn from a vast expanse of literary history from Latin America.'*

*Dr María Blanco*



# Magnificent maps

Donor support is helping the Bodleian Libraries to grow, conserve and research one of the world's foremost map collections

**O**ur remit is global and beyond,' explains Nick Millea, Map Librarian at the Bodleian. 'We've got maps of planets, places that don't exist; we've got all sorts.' Nick looks after the Bodleian Libraries' map collection – one of the world's principal cartographic collections. Ranging in date from the fourteenth through to the twenty-first century, it contains roughly 1.25 million maps, 20,000 atlases and a rapidly growing digital collection. 'Anything from material like the Gough Map, which is the earliest surviving map to show Britain in a geographically recognisable form, right through to items produced today on computer screens,' he says. 'If it's got spatial information on it, then we'll collect it.'

The Bodleian's collections play a significant role in academic research, which can involve the use of existing


maps held in the collection, as well as the creation of maps specific to an individual's personal requirements. Students, for example, may need to generate bespoke maps on which to plot data collected in the course of their fieldwork.

As well as academic research, readers draw on the Bodleian's map collections for a wide variety of other reasons. 'You get people planning expeditions, authors working on their novels, people wanting to know the history of a site because they'd like to develop it. International boundary disputes are an interesting one too, as well as police forces working on cold crimes – the map room helped to crack a cold case in Coventry,' he recalls. 'Just one of those things you don't expect.'

'Other things you probably don't expect are great big tapestries hanging on the wall!' says Nick. The Sheldon Tapestry

Map of Worcestershire, to which he is referring, is one of four commissioned by landowner Ralph Sheldon in the 1590s to decorate his newly built house at Weston, in south Warwickshire. It was bequeathed to the Bodleian in the early nineteenth century by antiquary Richard Gough, along with a companion tapestry illustrating Oxfordshire. A third, depicting Gloucestershire, was purchased by the Bodleian at auction in 2007, following a successful fundraising campaign.

Sheldon's tapestries were groundbreaking at the time of their creation, however 'from 1809, nobody really saw the Worcestershire tapestry again until 2012,' says Nick. It wasn't until work began on the Weston Library, and 'we realised that we would have this big wall in the Blackwell Hall – the perfect size to display a tapestry on – that everything started to fall into place.'



*'The enthusiasm that the Sheldon Tapestry Map has created has been a joy to behold.'*

Nick Millea



*‘To have been involved with this project has been an enormous privilege, and given me enormous satisfaction as a conservator.’*

*Virginia Lladó-Buisán*



The Bodleian embarked upon a cutting-edge programme of treatment, analysis and research that would bring together teams from across the library, as well as academics and scientists from institutions around the world. ‘We formed a pool of experts that could help us in finding the most appropriate approach to scientific analysis,’ explains Virginia Lladó-Buisán, Head of the Bodleian’s Conservation and Collection Care team.

While the tapestry underwent a process of delicate hand stitching at the National Trust’s textile workshop in Norfolk, back in Oxford work began to identify its provenance. ‘We analysed the dyes present in the tapestry, which has taken us a step closer to answering some of our scholarly questions,’ says Virginia. ‘Next, we want to ascertain the origin of the wool used to make the tapestries, which could potentially give an indication of the provenance.’

Although the map is now on show, the Bodleian’s work is far from over. The Worcestershire tapestry will continue to be monitored during its display, and conservation work will soon start on the Oxfordshire and Gloucestershire maps. Nick and Virginia are also planning

an international conference for 2017 focusing on the study and conservation of historic tapestries. ‘We’re hoping to live-stream it,’ explains Virginia, ‘to make sure that we are able to share the work we’ve done with the wider public. They’re very important tapestries.’

To the Bodleian, sharing research, knowledge and collections in this way is of paramount importance. ‘My role is to make sure that we reach out and communicate the work we do,’ says Virginia. ‘We teach people, we give lectures, we organise conferences, we provide training courses such as book binding, and we’re on social media. We’re an academic-related team, but we want to engage with people at all levels.’

Nick echoes this sentiment: ‘Such is the demand for information that we send somebody from our team down to the Worcestershire tapestry each morning to tell the public about it and answer questions. That’s all part of being in the Weston Library; all of a sudden people are coming in and they love what they can see, and we’re telling people “Look, we’ve got this!” The fact that we now have a glass door instead of a brick wall, and can say “come in”, well, it’s just terrific.’

Preserving and disseminating knowledge in this way would not be possible without the support of donors, whether helping the Bodleian to acquire maps of historical importance or funding their subsequent conservation and research. Donors to the conservation of the Sheldon map included The Clothworkers’ Foundation, Lady Elizabeth Marriner, the J Paul Getty Jnr Charitable Trust and the Drapers’ Charitable Fund.

‘It’s been a very expensive project, and still is,’ says Nick. ‘We couldn’t have done it without philanthropy – it’s just great to know that there are people out there who have an interest in maps, and feel as passionately about them as we do.’

The Bodleian’s map holdings are also part of its endowment campaign, which aims to secure, preserve and enhance the Bodleian Libraries’ unique resources for the benefit of future generations.

Read about another treasure from the Bodleian’s map collections – a rare illustration of Middle-earth annotated by J R R Tolkien:  
[www.campaign.ox.ac.uk/middle-earth](http://www.campaign.ox.ac.uk/middle-earth)





# Stories of civilisations

Sackler Keeper of Antiquities, Dr Paul Roberts, explains how stories derived from artefacts lie at the heart of connecting people with the past

**D**r Paul Roberts was enthralled by the past from a young age: 'From very early on I would run into the house with handfuls of blue and white china that I had dug up in the garden and shout "Treasure! Treasure!" I think I must have been four or five when I did that.' His love of archaeology and ancient history flourished through childhood, and it was following an inspirational visit to see Tutankhamun at the British Museum that he knew he was hooked. 'Museum visits are very, very important,' he reflects, 'no matter what the age. You never know where they may lead.'

As Sackler Keeper of Antiquities at the Ashmolean, Dr Roberts is responsible for the smooth running of the Department of Antiquities – an extensive division of the museum that covers Prehistory, Egypt, Greece, Rome, Mesopotamia, Cyprus and Britain, and contains art and artefacts from almost the entire span of human history. This famously includes treasures such as The Alfred Jewel and a 300,000-year-old hand axe from Wolvercote, Oxford. 'My job', Dr Roberts says, 'is to ensure that those objects are cared for in the broadest sense; that they are researched, shared, conserved, properly stored, and as widely enjoyed as possible. A curator should leave

the collections better known, and in a better state than he or she finds them in.'

As one of five museums belonging to Oxford University, and Britain's first public museum, the Ashmolean is responsible for sharing its collections both with the general public and with its academic partners. 'We're a university department, and we're very proud of that,' he notes. Exhibitions, for example, play an important role in enabling the department to engage both new and existing audiences, for its curators to share their work, and for academic colleagues to conduct research.

Higher education teaching within the department is also crucial, although as Dr Roberts emphasises, his team 'facilitates learning with everything they do, even if they're not formally teaching.' From public lectures and gallery talks to exhibitions, permanent displays and the publication of books and articles, their purpose remains the same: to encourage engagement with the collections. 'It's wonderful to see people getting involved on so many levels,' he says. 'I walk about the galleries and see children looking at objects – one of whom may replace me one day.'

Dr Roberts believes that stories lie at the heart of connecting people with the past.

He explains that the artefacts on display are, in fact, 'not artefacts at all – they're possessions. They're things that people used and touched and bought and loved and broke and threw away, or were even buried with. When we make the objects speak and make that connection with the people behind the objects, that's the main thing.'

Thanks to generous funding from the Dr Mortimer and Theresa Sackler Foundation, Dr Roberts' post is endowed in perpetuity, ensuring that there will always be someone at the Ashmolean to oversee these outstanding collections of antiquities. 'It's great to think that there are people out there who share our enthusiasm for the ancient world,' he says. 'And it's really quite a privilege to be able to do as your job something that you love so much that you'd probably volunteer for – although don't tell the University that! It's truly wonderful.'

The Ashmolean has launched an endowment campaign to raise £25 million by 2020, in order to secure key posts and underpin the ongoing conservation, care and display of its collections. Through this campaign, the museum will bring history to life for all of its visitors, for the next 300 years.





The Michalski family celebrating Christmas after six years apart

# A legacy of learning

Legacies made to the University come in all shapes and sizes, often reflecting the very personal motivations of donors

**K**azimierz Michalski, formerly the Bodleian's first Foreign Law Librarian, left a gift to the Bodleian Law Library in his will, following his death in 2012 at the age of 104. Numerous volumes on the subject of international law were purchased with this gift and are now housed at the Bodleian Law Library in the Faculty of Law on Manor Road.

Mr Michalski's gift reflected both his passion for foreign law and the enjoyment he gained from being a part of the Bodleian 'family' prior to his retirement. He described his experience of working at the library as providing him with 'happiness, a sense of fulfilment and intellectual stimulation.'

The path that led Polish-born Mr Michalski and his family to Oxford was far from straightforward. In 1939 when the war broke out, Mr Michalski was training to be a judge. Following the invasion of Poland by Germany and Russia, he travelled into the Soviet-occupied area in search of his wife and son. He was arrested by the secret police and sentenced to eight years in the Gulag, whilst his family were deported to Kazakhstan.

After the collapse of the Nazi-Soviet Pact in 1941, he was released and journeyed over 2,000 miles to join the Polish army in Uzbekistan, before eventually heading to Kazakhstan upon hearing news of his family. Mr Michalski continued to serve with the Allies, culminating in the liberation of Ancona and Bologna. In 1946 the Michalski family came to London before settling in Oxford in 1953.

Bodleian Law Librarian Dr Ruth Bird explains: 'Mr Michalski's gift to the library may have been modest, but its impact has been great. The students and faculty will continue to benefit from the international law volumes we have purchased with this money for many years to come.'

'Mr Michalski led quite an incredible life,' she continues. 'It is fitting that his memory will live on here at the University through this bequest.'



# Enabling cutting-edge microscopy research

## Japanese microscopy company JEOL's support for Oxford's electron microscopy group

**T**he high-tech electron microscopes of today bear little relationship to the small, bench-top optical microscopes familiar to many of us. The latest instruments can fill a room, and require a dedicated computer suite; operators typically work remotely from the microscope, in front of a bank of computer screens and controllers.

JEOL Ltd has supported microscopy at Oxford University for 40 years, creating a two-way exchange of new research ideas and microscopy techniques. Most recently, a generous benefaction from JEOL has enabled the appointment of a professorship and other posts in electron microscopy, as well as the establishment of a JEOL bursary at Linacre College. Here, two Oxford Professors of Materials explain the ongoing impact of this support.

Angus Kirkland, JEOL Professor of Electron Microscopy and Secretary General of the International Federation of Societies

for Microscopy (right), leads the Oxford Electron Image Analysis Group. His chief research interest is in the development of methods and instruments, including the theory and computation that accompany experiments, and their application to a range of materials problems.

Working with partners from the University, industry and overseas, Professor Kirkland is currently involved with three main areas of research: low-dimensional materials such as graphene, with its applications for structural materials and electronic device construction; nanoparticles, mainly relating to catalysts; and glass-like, amorphous materials.

These amorphous glasses, explains Professor Kirkland, 'have potentially interesting bioactivity. There's a lot of industrial interest at the moment in, for example, amorphous pharmaceuticals – non-crystalline versions of drug formulations.

'They are not crystalline, ordered arrays of atoms; they are essentially a quasi-random array of atoms in the material. So they are very difficult to understand structurally. One problem is that they are incredibly radiation sensitive, so they decompose very rapidly under the electron beam.'

Professor of Materials Peter Nellist (left), President of the Royal Microscopical Society, shares Professor Kirkland's interest in catalysis. 'Catalysts', he notes, 'are incredibly important. They are responsible for the vast majority of industrial chemical processes in the world.' They are used in the automotive sector (in car exhaust systems, for example) and the petrochemical sector, for refining. They also are required

for hydrogen fuel cells – a promising technology for controlling pollution.

Professor Nellist explains: 'A lot of catalysts consist of nanoparticles. To understand how a catalyst works, you need to be able to see the atoms within the nanoparticles – and the only way to do that is through electron microscopy. That then enables us to make better catalysts.'

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*'In the last 15 years we've seen a real quantum leap in the capabilities of instruments.'*

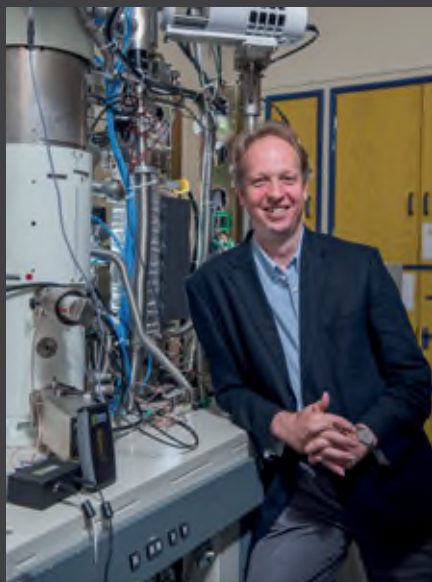
*Professor Peter Nellist*

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Professor Kirkland adds that full characterisation of many catalysts requires imaging under gas environments, being developed as part of the collaboration with JEOL.

Professor Nellist's group is also investigating the development of new lighting technologies. Lighting currently uses almost 20% of the world's energy production. The latest research focuses on light-emitting diode (LED) technology, based on the substance gallium nitride.

Not naturally occurring, gallium nitride has to be grown in a laboratory – but the crystals have a very high incidence of defects, known as dislocations. Although the gallium nitride is still usable, the dislocations reduce the efficiency and lifetime of the LEDs.







‘We’ve been seeking to understand’, says Professor Nellist, ‘exactly how the atoms are arranged in these defects, and then how we can control them and try to reduce how they affect the lighting.’

The relationship with JEOL inspires both sides, with JEOL developing technology to support new research ideas.

One example of this is a new type of camera for microscopes, able to take up to an incredible 20,000 pictures a second. The technology was suggested by JEOL for a ptychography technique Professor Nellist was interested in, which requires a very fast camera in order to take a large four-dimensional data set from the microscope.

Using the new camera, the technique Professor Nellist’s group has now developed enables researchers to look at a wider range of different atom types within a sample.

He points out that ‘carbon atoms in particular can be quite hard to detect, because carbon is a very light element – it doesn’t scatter electrons very strongly,

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*‘The JEOL funding is very flexible and responsive – this is hugely important to our more adventurous research, for which Oxford is well known.’*

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*Professor Angus Kirkland*

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So this has really broadened the range of materials that the microscope can be used to look at.’

The camera has recently enabled research into complicated carbon nanotubes in collaboration with the Department of Chemistry.

A second important development in the field, again developed with JEOL, is the electron monochromator. This provides

a low-energy spread in the electron beam, resulting in clearer images. It has been used to record images of individual defects in graphene.

Professor Kirkland stresses that the flexible nature of JEOL’s support ‘has been incredibly useful for us because it’s not tied to a particular research theme; it’s not ringfenced to any particular spending profile. It’s very flexible, very responsive funding. So we don’t have to second-guess at the start about what we’re going to need for the next five years. We can do that as we go along – which is hugely important.’

Professor Nellist concludes: ‘This type of support enables us to do those adventurous kinds of research that would be harder to fund through conventional routes.’

Read about the revolution behind today’s cutting-edge microscopy techniques:  
[www.campaign.ox.ac.uk/microscopy](http://www.campaign.ox.ac.uk/microscopy)



## Official opening of the Weston Library and the Blavatnik School of Government

**T**hree landmark building projects in Oxford were formally opened by HRH The Duke of Cambridge in May this year. The Weston Library and the Blavatnik School of Government represent significant developments for the University and the wider public. The Duke also opened the new Longwall Library at Magdalen College during his visit.

The transformation of the New Bodleian

Library into the Weston Library was supported by the Garfield Weston Foundation and Julian Blackwell, amongst other donors. In addition to specialist conservation facilities and reading rooms, the redevelopment provides new exhibition galleries and public spaces.

The Blavatnik School of Government was made possible with support from Leonard Blavatnik. The school undertakes teaching

and research into governance and public policy and is home to 120 Master of Public Policy students, in addition to DPhil students and academics.

Both buildings have been shortlisted for the 2016 RIBA Stirling Prize – the most prestigious award for architecture in the UK. The Weston Library was designed by Wilkinson Eyre, and the Blavatnik School by Herzog & de Meuron.

## Cook-Voyage Collection goes on display

A new permanent exhibition of treasures from Captain Cook's voyages to the South Pacific has been opened at the Pitt Rivers Museum. The display has been made possible with gifts from the DCMS Wolfson Museums and Galleries Improvement Fund, The Clothworkers' Foundation, and the Friends of the Museum. The fascinating exhibition brings together a range of cultural artefacts produced by Pacific islander

communities at the time of first contact with European explorers, and includes one of the few surviving examples of a Tahitian mourner's dress. The new display was officially opened by Sir David Attenborough in April 2016.

To go behind the scenes at the Pitt Rivers and find out about the work that went into conserving this remarkable collection, visit [www.campaign.ox.ac.uk/cook-voyage](http://www.campaign.ox.ac.uk/cook-voyage)







## Cecil the lion: the impact of your support one year on

**S**ince the extraordinary response to the illegal killing of Cecil the lion in July 2015, over 12,000 donors have given over £900,000 to the Wildlife Conservation Research Unit (WildCRU), part of the Department of Zoology at Oxford. WildCRU had been tracking Cecil as part of a study in Hwange, Zimbabwe to find ways to better manage lion conservation.

With this support, over the past year WildCRU have been able to more than double the number of lions they are monitoring, more than double the number of communities they are working with, and more than double the number of community lion guardians they are training to safeguard lions that stray into unprotected areas. In addition, several students from Zimbabwe have received scholarships to enable them to undertake the Postgraduate Diploma in International Wildlife Conservation Practice at Oxford.

In September 2016, WildCRU hosted the first ever 'Cecil summit' in Oxford,

which brought together a range of experts in lion conservation from across the world. Professor David Macdonald, Director of WildCRU, said: 'It is imperative that we grasp the momentum that Cecil's death has instigated towards finding solutions to protect the future of lions. This summit has enabled us to set out some realistic goals for the future – but much of this will depend upon securing funding from a variety of sources. I remain enormously grateful to all those who are supporting our activities.'

*'It is imperative that we grasp the momentum that Cecil's death has instigated towards finding solutions to protect the future of lions.'*

*Professor David Macdonald*

## Oxford Thinking Campaign Statistics

### Amount raised this year:

(01/08/15 to 31/07/16 including cumulative college data to 31/01/16 only)

**£273M**

### Amount raised since the start of the campaign:

(01/08/15 to 31/07/16 including cumulative college data to 31/01/16 only)

**£2.41BN**

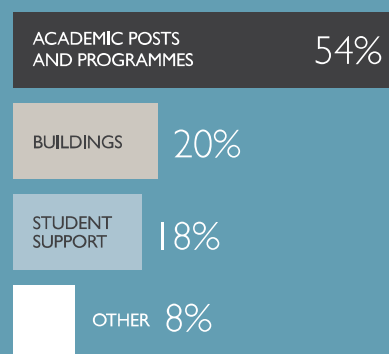
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### Destination of campaign gifts by priority area:

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