



Archaeology at Cambridge

2015–2016





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Introduction: The McDonald Institute and Archaeology at Cambridge

CYPRIAN BROODBANK (*Director*) & SIMON STODDART (*Acting Deputy Director*)

Archaeology at Cambridge presents the activities of archaeologists across Cambridge University, in the McDonald Institute for Archaeological Research, the Division of Archaeology and wider Department of Archaeology and Anthropology, Cambridge Archaeological Unit, the Museum of Archaeology and Anthropology, the Faculty of Classics, the Fitzwilliam Museum and the Institute of Continuing Education. The McDonald Institute provides a focus for this broad, globally engaged interdisciplinary community. In 2015–16 it served as a research hub for over 47 staff archaeologists, 59 Research Fellows, 22 Senior Fellows, 24 Visiting Scholars and 23 Affiliated Scholars. While this annual publication summarizes our achievements over the past year, we are also rapidly expanding our digital presence and invite readers to follow our faster-moving news there too (see inside front cover).

The three banner headlines of this past year are undoubtedly the launch of our new Tripos (undergraduate degree) in Archaeology, the astonishing discoveries of Cambridge Archaeological Unit at Must Farm (pp. 5–6) and Cambridge's sweeping prizes at the Shanghai Archaeology Forum. The Tripos is a freshly designed and tremendously exciting degree that extends from cutting-edge core archaeology to ancient Mesopotamian and Egyptian languages at one end, and biological anthropology and genetics at the other. We are recruiting strongly for a first 2017–18 entry that promises to put Cambridge back at the centre of the map for teaching many of the world's best future archaeologists and many of its global citizens. At Must Farm, the astonishing organic preservation of a 3000-year-old Bronze Age

village in the fenland north of Cambridge captured immense media attention and a global following, while forging new regional collaborative agendas between Cambridge Archaeology and a range of local and national government bodies and other stake-holders. In Shanghai, Colin Renfrew received a lifetime achievement award, and three out of eleven research awards went to Martin Jones, Eske Willerslev (Zoology) and our Senior Fellow (and Boston University emeritus) Norman Hammond (p. 31). Other highlights range from Marta Lahr's game-changing discovery of group violence among early Holocene hunter-gatherers near Lake Turkana to Gilly Carr's bid to include the Holocaust heroine and Channel Islander, Dorothea Weber, in the Righteous Among the Nations, for which she received a Vice Chancellor's Impact Award (p. 27). In addition, the Pitoti project was given one of Europa Nostra's prestigious awards for research and digitization.

Among numerous new projects, the leading news is a major award from the Wellcome Trust to John Robb, Toomas Kivisild, Piers Mitchell and Craig Cessford for 'After the plague: health and history in medieval Cambridge'. This interdisciplinary flagship project is emblematic of growing links with Cambridge Archaeological Unit (who excavated the cemetery under analysis) as well as Biological Anthropology, and we gratefully acknowledge the support of St John's College, under whose buildings the remains were discovered. Equally symptomatic of



The Vice Chancellor, Professor Sir Leszek Borysiewicz, examining an intact pottery vessel on a visit to excavations at Must Farm.



Potential applicants to the new Tripos launching in 2017. Sixth-form students participating in the St John's College Archaeology Summer School sampled lectures, tutorials, workshops and excavation, reflecting the breadth of the new Cambridge Archaeology degree.



Colin Renfrew receiving a lifetime achievement award at the 2015 Shanghai Archaeology Forum in December 2015.

new beginnings is our Horizon 2020 twinning partnership with the University of Zagreb, led from Cambridge's end by Preston Miracle.

The McDonald's programme of high-profile lectures has been exceptionally full. We single out an inspiring Annual McDonald Lecture by Norman Yoffee on 'Counternarratives of Early States in Mesopotamia (and Elsewhere)', and week-long visits by our first two Distinguished Visiting Lecturers, Tim Pauketat (with Susan Alt) who spoke on 'Being and nothingness in pre-Columbian North America' and Stephen Houston, who addressed us memorably on 'Sounding Off: Murmurs, cries and cackles in Maya glyphs'. The aim of this new, ongoing programme of Distinguished Visiting Lecturers is to embed outstanding scholars in our community, for a week of informal discussions, seminars and keynote addresses. Stephen Houston also gave our second Raymond and Beverly Sackler Distinguished Lecture in Archaeology in Honour of Professor Norman Hammond, on the subject of his remarkable finds at the Temple of the Night Sun (El Zotz), following a compelling first such lecture by Peter Addyman on 'Creating Heritage: Vikings, Jorvik and public interest archaeology'. Meanwhile, a busy year of conferences and workshops included events dedicated to rethinking textual archaeology in the ancient Near East, transcending controversies in European archaeometallurgy, environment and economy in ancient Campania, sharing in hunter-gatherer societies past and present, new directions in lithic analysis, as well as workshops on digital technologies and pXRF, and a meeting of the Anthropocene Working Group. Finally, the period over the summer was made brighter still by an exhibition in the McDonald of the richly coloured Orkney paintings of Julia Sorrell, sponsored by the ACE foundation (p. 3).

As ever, a brilliant new cohort of postdoctoral research fellows joined the McDonald over the 2015–16 academic year, including Enrico Crema as our own McDonald Fellow (briefly, see below!), Toby Wilkinson as a Fellow in Eurasian and Ancient Near Eastern Archaeology held jointly with a Junior Research Fellowship at Churchill College, Marjolein Bosch, Alice Leplongeon, Luc Moreau and Argyro Nafplioti as Marie Skłodowska-Curie Fellows, Emuobosa Orijiemie as a Newton International Fellow, Hermine Xhaufclair as a Fyssen Foundation Fellow and Emma Pomeroy as a Leverhulme Early Career Fellow. In addition, Beatriz Marin-Aguilera joins Margarita Gleba's PROCON ERC project, and to Jay Stock's ADAPT project come Alison Mackintosh, Pedro Ibanez-Gimeno and Robert Beyer. The competition for our annually awarded three-year McDonald postdoctoral Fellowship was re-launched as the Renfrew Fellowship, in honour of the McDonald's founding Director, and coupled with Homerton College in the first of a cycle of collegiate associations. The successful candidates were Tom Leppard and Julia Farley; the former joins us in October 2016; the latter has since been appointed to a curatorial post at the British Museum. This year we also supported two Field Archaeologists in Residence, Craig Cessford working on the archaeology of Cambridge Collegiate crockery, and Matthew Edgeworth on the archaeology of the Anthropocene. Among our sabbatical visitors it was a pleasure to have with us in Cambridge Mark Aldenderfer, Christine Hastorf, Sun Keqin, Chungkyu Lee, Gavin Lucas and Ezra Zubrow. And as ever, it is far more sweet than sad to celebrate those of our community who leave us for lectureships elsewhere, namely Emanuela Cristiani to La Sapienza, Jake Dunn just down the road to Anglia Ruskin, Evi Margaritis to the Cyprus Institute, Emma Pomeroy to John Moores, Ronika Power to Macquarie and Alice Samson to Leicester. Jenni French moves to a Leverhulme Early Career Fellowship at UCL.

The Division of Archaeology continues to grow, supported by an energetic new team of administrative and outreach staff, led by Ben Davenport. We were very fortunate to be able to appoint two outstanding new lecturers in areas that we have targeted for expansion, both starting in September 2016. Enrico Crema moves on from his postdoctoral fellowship to a Lectureship in Computational Analysis of Long-term Human Cultural and Biological Dynamics, plus a Fellowship at Fitzwilliam College, and Dacia Viejo-Rose becomes our new Lecturer in Heritage and the Politics of the Past, with a Fellowship at Selwyn College generously funded through the Trinity Scheme. These posts pave the way towards an enlarged role for Cambridge Archaeology as a hub for new research connections in computational analysis and heritage in and beyond Cambridge. Warmest congratulations also go to Augusta McMahon and Cameron Petrie for their more than deserved promotions to Readerships.

Our students continue to excel. Our final-year undergraduates achieved an impressive four Firsts and three Starred Firsts and our MPhil students achieved 10 Distinctions. Particular congratulations go to Matthew Greenhill (Part IIA), who was awarded the Mark Gregson prize, and Tansy Brancombe (Part IIB), who received the Anglia prize, for the greatest distinction in their year. Isaac Lawton, Aran McMahon and Katherine Wilson were jointly awarded the Daniel prize for performances in their dissertations. Our MPhil cohort continues to grow, with 36 students undertaking programmes in Archaeology (including heritage), Egyptology and Assyriology this year. The Division welcomed 19 new PhD students, raising our total of doctoral students to 75, with 11 PhDs successfully completed during the year. The graduate community, as ever, contributed immensely to our community's dynamism. September 2016 saw Cambridge host the student-run Annual Student Archaeology Conference in the McDonald Institute, on the theme of 'developing integrated archaeology', while a postgraduate editorial team produced two further issues of the *Archaeological Review* from Cambridge themed on 'Myths Within and Without' and 'In the Trenches'.

Turning to fundraising, 2015–16 has proven another busy year in support of our drive for an endowed Chair in African Archaeology. One unforgettable event hosted in partnership with Magdalene College featured a keynote address by the Asantehene, and lectures by Catherine Namono and Caleb Adebayo Folorunso. We thank Rowan Williams, Master of the College, for his continued support for this initiative, in conjunction with the Mandela Magdalene Memorial Foundation.

McDonald publications are back on track with a full slate of offerings and a new commitment to on-line access. The four volumes that appeared during the course of this year (pp. 60–61) give a flavour of the many more in proof or in preparation that will be covered next year. *The Provincial Archaeology of the Assyrian Empire* affirms our commitment to publication of major conferences at the McDonald. *Twice-crossed River* demonstrates our close ties with the Cambridge Archaeological Unit, and the prospect of increasing regional work supported by the McDonald, in the tradition of Grahame Clark and David Clarke. *Twice-crossed River* was launched in the presence of an impressive array of senior British archaeologists together with a second major volume on Mucking, an historic, seminal excavation resurrected from the storerooms and archives by our Unit's dedication. Two more Keros volumes demonstrate how Colin Renfrew continues his remarkable research based on new fieldwork in the Aegean, and we fully expect a gathering of leading figures in Aegean archaeology when the full assemblage of volumes is achieved in the near future. In parallel, John Robb, with Augusta McMahon,

Elizabeth DeMarrais and Katherine Boyle, take *Cambridge Archaeological Journal* from strength to strength.

Overall we thank, as ever, our magnificent support and technical staff, and welcome to the team Laure Bonner as Archaeology's new outreach/communications administrator, Anna Mahony as undergraduate administrator, Katie Teague as graduate administrator and Patricia Murray as a new welcoming face on Reception. With deep sadness we mourn the sudden death of our good friend and Faculty Administrator, Jane Fisher-Hunt, a source of wise advice, profound knowledge, boundless wit and mellifluous song in equal measure.

We end on a defiant and upbeat note. The result of the 'Brexit' vote on 23 June 2016 was obviously a far from desired outcome for a scholarly community of exceptionally international composition and global reach, many with strong ties to Europe through family, friendships, institutional and other affiliations. We remain entirely committed to maintaining and extending our relations with our European colleagues and peer institutions over the coming years, and to demonstrating how a connected past can change views in a challenging present, where the messages of archaeology have never mattered more.



A watercolour, now belonging to the Institute, of Maeshowe Chambered Cairn by the artist Julia Sorrell. Maeshowe was excavated by the founding director of the McDonald, Colin Renfrew, in 1973.

The Museum of Archaeology and Anthropology (MAA)

CHRIS WINGFIELD

The museum was engaged in a range of activity during the year, including exhibitions, teaching and research, as well as significant developments in relation to our database. There has also been considerable work towards identifying a replacement for our now inadequate offsite store. The summer saw the completion of an inventory and barcoding project in the onsite archaeology store.

A particular highlight of the year has been the development and opening of MAA's first archaeology-focused exhibition in the Li Ka Shing Gallery since this space opened in 2012: *Hide and Seek: Looking for Children in the Past*. This exhibition asks how we can identify artefacts relating to children in existing collections and the archaeological record and interpret them in a way that is engaging to the public, as well as what stories do these objects allow us to tell about children in the past? The exhibition has been the first time the museum and Cambridgeshire County Council have collaborated on a piece of work, supported by a grant from the Heritage Lottery Fund.

Following redecoration and the installation of new projection equipment and lighting track in the early summer, the South Lecture Room featured *Antipodes* during the summer vacation, an exhibition which emerged from a collaboration between the University of Cambridge Museums and the Australian Print Workshop. The museum also hosted an exhibition in its Micro Gallery from January until September 2016, *Tuniit: Arctic Giants & Ivory Miniatures*, featuring miniature carvings in walrus ivory made between 500 and 1500 AD in the Canadian territory of Nunavut.

Less outwardly visible was a major project to consolidate eight existing museum databases into a single integrated digital framework, completed in March. In addition, we commissioned and developed a new system to manage and store the 300,000 digital images that have accumulated at the museum since the beginning of the new millennium. MAA also embarked on a new project to begin developing 3D photogrammetric models of objects in the collections for teaching purposes:

<https://sketchfab.com/MAACambridge>

The museum received just under 63,729 visitors over the course of the year, an increase of just under 5 per cent compared with the previous year. MAA's teaching collection was extensively used, hosting over 489 student visits during 53 practical sessions, 20 open sessions, an Archaeology Open Day and the Sutton Trust summer school. The museum also hosted 184 research visits over the course of the year, including 213 researchers over the equivalent of 302 research days. This included a group from the University of Bonn, who spent an entire month over the summer 3D-scanning our Mayan casts, donated by Alfred Maudslay as one of the founding collections of the museum.

Artefacts on loan this year included three objects of Peruvian goldwork to the Fitzwilliam Museum for the exhibition *Encounters: Money in the Age of Discovery* (2 February–30 May 2016).

Chris Wingfield, Senior Curator (World Archaeology), was on research leave during Michaelmas Term 2015, supported by an early career fellowship at CRASSH, Cambridge's Centre for Research in the Arts, Social Sciences and Humanities.



Left: Gallery view, *Hide and Seek: Looking for Children in the Past*; centre, above: Photogrammetry setup used by Eleanor Wilkinson whilst scanning an Olmec jade carving; centre, below: A volunteer scans a newly-barcoded box during the yearly Inventory Project; Right: Dr Christian Prager and Antje Grothe scanning a Maya cast in MAA's gallery.

1. Must Farm, collapsed Late Bronze Age roundhouse roof timbers.



DAVE WEBB

Cambridge Archaeological Unit

CHRISTOPHER EVANS

Must Farm can, of course, only rank as *the* event of the year. Jointly funded by Forterra and Historic England, the preservation and *in situ* structural evidence of this Late Bronze Age river pile-dwelling hamlet exceeded all expectations and was nothing short of miraculous. Surrounded by a palisade with a raised internal walkway, five stilt-built roundhouses

lay in its surviving southern half. The short-lived settlement was destroyed by fire. The roof timbers of its buildings had collapsed vertically (1), sealing the household's contents to provide extraordinary inventories of their worldly goods. These included a wealth of bronze metalwork, complete pots (even small eggcup-size ones), plus a wide array of organic containers and various wood implements. Aside, for example, from two disc-wheels (2) and a hafted-axe (3) (plus a bucket-hoard of metal scrap), the latter include paddle-like pieces possibly relating to textile production, and,



DAVE WEBB

2. Must Farm, disc wheel.



DAVE WEBB

3. Must Farm, hafted axe.

DAVE WEBB



4. Must Farm, plant fibre textiles.

entirely unparalleled, plant textiles were widely recovered as both woven pieces and preparatory wound fibre balls (4). (Predating the roundhouse hamlet proper were the uprights of a major, cross-marsh causeway (5), though an enormous mortise-cut base-plate timber could suggest that its line was actually bridged at this river-crossing point.)

In short, the site fully lived up to the 'Pompeii of the Fens' allusions ascribed to it. Duly receiving the British

DAVE WEBB



5. Must Farm, causeway/bridge timbers.

Archaeological Award's 'Best Discovery' for the year, it attracted unprecedented international press attention (unheard of, it even featured in the *Times Literary Supplement* and *The New Yorker*); Continental colleagues arranged day-trips to visit it and its social media updates eventually reached more than four million.

The fruits of the team's painstaking efforts will now require specialist study for years, and high-level discussions are currently in train for the findings' permanent display.

The year has also seen a number of major landscape investigations. We returned to Lancaster Way, Ely, digging an extension of its Romano-British farmstead—plus a separate Iron Age 'banjo-type' enclosure—which proved an apt location for the Division of Archaeology's annual student training dig. Also, another large plot of the greater Addenbrooke's Hospital/Biomedical Campus lands has been excavated, including both Middle Bronze Age and Conquest Period enclosure systems, with the latter also having three small Aylesford-Swarling cremation ring-burials (6).

DAVE WEBB



6. Addenbrooke's Hospital cremation rings.

DAVE WEBB



7. Newmarket Road, Cambridge, Iron Age pit settlement deposits.

MARCUS BRITAIN



DAVE WEBB

8. *'The archaeology of the hovertrain', recording (left) and reconstruction (right).*

The winter saw the excavation of a huge Iron Age settlement alongside Cambridge's Newmarket Road, opposite the city's Marshall's Airport. This consisted of literally hundreds of densely set Early/Middle-period pits (with both human and animal burials), as well as a network of Middle and Late Iron Age compounds (7). Its early phases are, in fact, reminiscent of the similarly vast pit-cluster settlement dug some years ago at Trumpington Meadows. The latter's publication has now been completed and has involved DNA analysis of its series of worked human bone 'tools'.

September saw the last of our Ouse Washes' HLF-funded programme of local community projects. Earlier in the summer this involved recording the route and last remaining facilities of the experimental tracked hovertrain (8), whose trials were conducted in the early 1970s alongside the Bedford Level north of Earith. A case of the 'archaeology of the (once) future', including both interviews and digital survey (and virtual reconstruction), this was filmed and will shortly be issued on YouTube.

The year's main Ouse Washes excavation was on the site of a nineteenth-century utopian colony at Manea (9), and this revealed its associated brick-lined tanks, pits

and foundations. Aside from attracting much local press coverage, this proved very popular; as did a day-school on the findings and the colony's history, jointly hosted with our project partner, the Octavia Hill Museum, Wisbech.

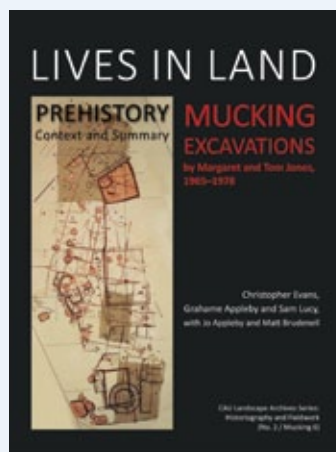
The next few years look set to be equally packed for the Unit. We've just begun the next blocks of Over, Broom and Waterbeach's quarry extensions, and have commenced the next excavation phases for the Longstanton/Northstowe new town-development. Extending over more than 100 ha, this will encompass both an enormous Romano-British crossroads' settlement and a series of separate Iron Age enclosures.

Finally, the Unit has seen three volumes published over the last year. Marking the end of an era, among these are the last two concerned with the renowned Mucking, Essex excavations of 1965–1978 (Prehistory & Roman), plus also the first book covering Barleycroft Farm/Over's fieldwork straddling the fenward reaches of the River Great Ouse (*Twice-crossed River*). The latter appears in the McDonald Institute's Monographs' series (see p. 57), in which the Unit's completed Grand Arcade, Cambridge and Bradley Fen, Whittlesey volumes will feature next year.

DAVE WEBB



9. *The Manea utopian colony site.*



Faculty of Classics

MARTIN MILLETT

The Classical Archaeology group ('D Caucus') in the Faculty of Classics had another good year.

Our well-supported programme of seminars continued, with a wide range of presentations including papers from Felix Pirson (Deutsches Archäologisches Institut - Istanbul), Nicolò dell'Unto (University of Lund), Chrystina Häuber (Ludwig-Maximilians Universität, Munich) and Lynne Lancaster (Ohio University). In May the series was complemented by two workshops led by our Marie Curie fellows, Dunia Filippi and Stefano Campana. These seminars were respectively on 'Ancient Topography, Landscape Archaeology and Human Landscape' and 'Archaeological Survey and the Mediterranean Countryside', with both attended by distinguished international contributors.

Fieldwork survey projects also flourished, with work at Aldborough in North Yorkshire (in collaboration with the Landscape Research Centre), in Etruria (as part of Stefano Campana's Marie Curie fellowship project), at Interamna Lirenas (Lazio, Italy) and Falerii Novi (Lazio, Italy).

In January a day-event celebrated the donation of the Mycenae archive to the Faculty. Progress was made on the organization and housing of this archive. Work also continued on the publication of the Bronze Age phases from Lerna.

Finally, Professor Andrew Wallace-Hadrill was awarded an ERC Advanced Grant for a major project on the 'Impact of the Ancient City' which will be housed in the Faculty.



STEFANO CAMPANA

Drone-mounted LiDAR survey of a wooded landscape in Italy undertaken as part of Marie-Curie Emptyscapes project.

Institute of Continuing Education (ICE)

GILLIAN CARR & SUSAN OOSTHUIZEN

The Institute of Continuing Education (ICE) at Madingley Hall continues to offer part-time University of Cambridge awards in Historic Environment and Archaeology at first-, second- and third-year undergraduate levels. Academic leadership in Archaeology is provided by Dr Gillian Carr, University Senior Lecturer in Archaeology, and in Historic Environment by Dr Susan Oosthuizen, Reader in Medieval Archaeology, both affiliated to the Division of Archaeology. The Awards offered by the Institute include Certificate, Diploma and Advanced Diploma courses. ICE also offers non-accredited short weekly courses, weekends and online courses at first-year undergraduate level.

The Advanced Diploma is a research-based course in which students undertake a project under individual supervision. Advanced Diploma projects in 2015–16 in Historic Environment have included research on early medieval and medieval landscapes in Burgundy, and on the impact of early medieval migration on the landscape around Milton Keynes. In Archaeology, completed Advanced Diploma projects have included a project on the Anglo-Saxon cemetery at St Peter's in Broadstairs, Kent, and on Le Câtillon Iron Age coin hoard in Jersey. The Certificate and Diploma in Archaeology were successfully offered, as was a successful new interdisciplinary Certificate in the Study of Early Medieval England which included modules in Archaeology, Historic Environment and History of Art. Non-accredited online courses were offered in Archaeology (*Googling the Earth*) and Historic Environment (*The Medieval Village Landscape*). The ICE is an enthusiastic contributor to the Festival of Ideas, offering an annual field-visit led by Dr Oosthuizen and a lecture in Archaeology by Dr Carr.

Finally, a healthy number of weekend courses continues to be offered in Historic Environment and in Archaeology and Anthropology, including those in prehistoric, Roman, Anglo-Saxon, Viking, ancient Egyptian and medieval archaeology. A conference on landscapes designed by Lancelot 'Capability' Brown was held to mark the tercentenary of his birth. Courses in the Historic Environment included, among others, designed landscapes, place-names and early medieval agricultural landscapes.



Madingley Hall, home of the Institute of Continuing Education.

Members

- **Dr Martin Allen** (*Fitzwilliam Museum*)
Later medieval English coins and tokens
- **Dr Sally-Ann Ashton** (*Fitzwilliam Museum*)
Egyptology
- **Dr Robert Attenborough** (*Biological Anthropology*)
Anthropological and archaeological genetics; evolutionary anthropology; human population biology and health
- **Dr James Barrett**
(*McDonald Institute for Archaeological Research*)
Medieval archaeology and historical ecology
- **Dr Kate Beats** (*Faculty of Classics*)
Curator of Museum of Classical Archaeology
- **Dr Katherine Boyle**
(*McDonald Institute for Archaeological Research*)
Archaeozoology; environmental archaeology; palaeobiogeography; European prehistory
- **Dr Marcus Brittain**
(*Cambridge Archaeological Unit*)
Interaction of landscape, memory and identity within non-literate societies
- **Prof. Cyprian Broodbank**
(*McDonald Institute for Archaeological Research*)
Mediterranean archaeology and history; Aegean prehistory; island archaeology; landscape archaeology; comparative world archaeology
- **Dr Judith Bunbury** (*Department of Earth Sciences*)
Geoarchaeology in Egypt
- **Dr Lucilla Burn** (*Fitzwilliam Museum*)
Greek vases and terracottas; the Classical tradition
- **Dr Gillian Carr**
(*Institute of Continuing Education*)
The archaeology and heritage of WWII, specifically the German occupation of the Channel Islands
- **Craig Cessford**
(*Cambridge Archaeological Unit*)
Medieval and later urban archaeology
- **Dr Tiziana D'Angelo** (*Faculty of Classics*)
Classical art and archaeology
- **Dr Elizabeth DeMarrais** (*Division of Archaeology*)
Archaeological theory; Andean archaeology; settlement patterns
- **Alison Dickens**
(*Cambridge Archaeological Unit*)
Standing buildings and the development of urban centres
- **Christopher Evans**
(*Cambridge Archaeological Unit*)
British archaeology; Nepal; China; Cape Verde
- **Prof. Charles French**
(*Division of Archaeology*)
Landscape interpretation; soil micromorphology; scientific rescue archaeology
- **Dr Ioannis Galanakis** (*Faculty of Classics*)
Greek prehistory
- **David Gibson** (*Cambridge Archaeological Unit*)
Neolithic and Bronze Age
- **Dr Susanne Hakenbeck** (*Division of Archaeology*)
Early medieval Europe; mortuary studies; archaeological theory; stable isotope analysis
- **Dr Liliana Janik** (*Division of Archaeology*)
Archaeological theory; visual cognition in rock art
- **Prof. Martin Jones** (*Division of Archaeology*)
Archaeobotany; environmental archaeology; early agriculture
- **Dr Jody Joy** (*Museum of Archaeology & Anthropology*)
Senior Assistant Curator of Archaeology
- **Dr Toomas Kivisild**
(*Biological Anthropology*)
Human evolutionary genetics
- **Dr Mark Knight**
(*Cambridge Archaeological Unit*)
Prehistoric and wetland field archaeology
- **Dr Alessandro Launaro** (*Faculty of Classics*)
Archaeology and history of the Italian countryside (c. 200 BC–AD 100)
- **Dr Sam Lucy** (*Newnham College*)
Anglo-Saxon archaeology
- **Dr Augusta McMahon**
(*Division of Archaeology*)
Mesopotamian archaeology and history, complex society, site biography
- **Prof. Martin Millett** FBA (*Faculty of Classics*)
The social and economic archaeology of the Roman world
- **Dr Preston Miracle** (*Division of Archaeology*)
Palaeolithic and Mesolithic Europe; zooarchaeology; ethnoarchaeology; palaeoanthropology
- **Dr Philip Nigst** (*Division of Archaeology*)
Palaeolithic archaeology
- **Dr Tamsin O'Connell**
(*Division of Archaeology*)
Diet and nutrition in past and present human populations; stable isotope techniques
- **Dr Susan Oosthuizen**
(*Institute of Continuing Education*)
Landscape, field and garden archaeology, especially Anglo-Saxon and medieval
- **Prof. Robin Osborne** FBA
(*Faculty of Classics*)
The iconography of 'everyday life' scenes on Athenian pots; the Classical Body
- **Dr Hratch Papazian** (*Division of Archaeology*)
Egyptology
- **Dr Cameron Petrie** (*Division of Archaeology*)
South Asian studies
- **Dr Adrian Popescu** (*Fitzwilliam Museum*)
Ancient coins and medals
- **Dr John Robb** (*Division of Archaeology*)
Neolithic Europe; archaeological theory; symbolism and agency
- **Dr Marie Louise Stig Sørensen**
(*Division of Archaeology*)
Bronze Age Europe; archaeological heritage studies; archaeological theory
- **Dr Kate Spence** (*Division of Archaeology*)
Archaeology of ancient Egypt; urbanism and built environment; social history; art
- **Dr Nigel Spivey** (*Faculty of Classics*)
Etruscan art and archaeology; Greco-Roman art; the anthropology of art
- **Dr Janice Stargardt** (*Department of Geography*)
Late Iron Age transition to early urbanism in South East Asia
- **Dr Jay Stock** (*LCHES*)
Bioarchaeology, human osteology, human growth and development
- **Dr Simon Stoddart** (*Division of Archaeology*)
Later European prehistory; landscape archaeology; complex societies; island communities
- **Dr Simon Timberlake**
(*Cambridge Archaeological Unit*)
Bronze Age; archaeometallurgy; experimental archaeology
- **Dr Susanne Turner** (*Faculty of Classics*)
Curator of Museum of Classical Archaeology
- **Dr Dacia Viejo Rose** (*Division of Archaeology*)
War-time destruction of cultural heritage and its post-war reconstruction
- **Dr Caroline Vout** (*Faculty of Classics*)
- **Prof. Andrew Wallace-Hadrill** FBA
(*Faculty of Classics*)
Roman studies
- **Prof. Eske Willerslev** (*Department of Zoology*)
Prince Philip Chair of Ecology and Evolution
- **Dr Chris Wingfield**
(*Museum of Archaeology & Anthropology*)
Senior Assistant Curator of Archaeology
- **Dr Martin Worthington** (*Division of Archaeology*)
Akkadian language, literature and medicine

Senior McDonald Fellows

- **Prof. Graeme Barker** FBA
(*McDonald Institute for Archaeological Research*)
Landscape archaeology (Mediterranean, arid zone, tropical); transitions to farming
- **Dr Roger Bland** (*Retired*)
Department of Portable Antiquities and Treasure
- **Janine Bourriau** (*Retired*)
Egyptology and ceramics
- **Prof. Dilip Chakrabarti** (*Retired*)
Ancient India
- **Dr Christopher Chippindale** (*Retired*)
Australian rock art
- **Dr Harriet Crawford** (*Institute of Archaeology, UCL*)
Mesopotamia and Persian Gulf



Senior McDonald Fellows (cont.)

- **Dr Corinne Duhig** (*McDonald Institute for Archaeological Research*)
Osteoarchaeology
- **Prof. Norman Hammond** FBA (*Boston University*)
Origins, florescence and decline of Maya civilization in Mesoamerica
- **Dr Catherine Hills** (*Retired*)
Anglo-Saxon England; Europe in migration and early medieval periods
- **Prof. Barry Kemp** FBA (*Retired*)
Egyptology
- **Prof. Geoffrey Martin** (*Honorary Keeper of the Archives, Christ's College*)
Egyptology
- **Prof. Nick Mascie Taylor** (*Retired*)
Human population biology and health
- **Prof. William McGrew** (*Retired*)
Modelling the evolutionary origins of human behaviour, especially material culture
- **Prof. Sir Paul Mellars** FBA (*Retired*)
Palaeolithic and Mesolithic archaeology
- **Dr Joan Oates** FBA (*Retired*)
Mesopotamia and Syria
- **Prof. Nicholas Postgate** FBA (*Retired*)
Assyriology; social and economic history of Mesopotamia
- **Dr Kate Pretty** (*Retired*)
- **Prof. Lord Colin Renfrew** FBA (*Retired*)
Keros Project
- **Dr Jane Renfrew** (*Retired*)
The uses of plants by prehistoric man; ancient agriculture
- **Dr Colin Shell** (*Retired*)
2D & 3D geophysical survey
- **Prof. Anthony Snodgrass** FBA (*Retired*)
Boeotia Project
- **Dr Ghanim Wahida** (*Retired*)
Middle Palaeolithic assemblage of Barakah open-air site in Abu Dhabi Emirate
- **Prof. Ann Wintle** (*Retired*)
Luminescence dating

McDonald Research Fellows

- **Craig Alexander** (*Research Associate*)
PITOTI Project; rock art of northern Italy
- **Dr Frederick Baker** (*Research Associate*)
PITOTI Project; rock art of northern Italy
- **Dr Giovanni Bellandi** (*Research Associate*)
PITOTI Project; rock art of northern Italy
- **Dr David Beresford-Jones** (*Research Associate*)
One River project; ancient land and water use along the Rio Icam, south-central Andes
- **Dr Robert Beyer** (*Research Associate*)
ADAPT: Adaptation, dispersal and phenotype

- **Dr Elizabeth Blake** (*Research Associate, Wolfson College*)
Emergence of modern behaviours; soundscapes; stone-tool technology
- **Dr Roger Blench** (*Kay Williamson Educational Foundation*)
Linguistics and anthropology in West-Central Africa, South East Asia and Peru
- **Dr James Blinkhorn** (*Research Associate*)
Palaeolithic archaeology and South Asian Prehistory
- **Dr Marjolein Bosch** (*Marie Curie Postdoctoral Researcher*)
Behavioural modernity in the Early Upper Palaeolithic
- **Dr Michael Boyd** (*Stavros S. Niarchos Research Fellow*)
Icon and centre in the Cycladic early Bronze Age
- **Dr Sandra Brunnegger** (*Junior Research Fellow, St Edmunds College*)
Latin America
- **Dr Laura Buck** (*Research Associate*)
ADAPT: Asaptation, dispersal and phenotype
- **Dr Stefano Campana** (*Faculty of Classics*)
Landscape archaeology and archaeological methodology
- **Dr Helen Chappell** (*MRC Human Nutrition Research Unit*)
Modelling of nanominerals; effects of trace elements and isotopes on their structure and function
- **Dr Andrew Clarke** (*Leverhulme Early Career Fellow*)
Applied agro-archaeology in Eastern Africa
- **Dr Enrico Crema** (*McDonald Anniversary Fellow*)
Modelling the emergence and evolution of cultural boundaries
- **Dr Joanne Cutler** (*Research Associate*)
PROCON project: textile economy and urbanization in Mediterranean Europe
- **Dr Paola di Giuseppantonio di Franco** (*Marie Curie Postdoctoral Researcher*)
Digital artefacts: how people perceive tangible cultural heritage through different media
- **Dr Lucy Farr** (*Research Associate*)
Demography of Pleistocene hunter-gatherer populations of Europe
- **Dr Dunia Filippi** (*Faculty of Classics*)
Roman topography
- **Dr Peter Forster** (*Murray Edwards College*)
Population genetics
- **Dr Jennifer French** (*Junior Research Fellow, Peterhouse*)
Neanderthals and Modern Humans; demography of Pleistocene hunter-gatherer populations of Europe
- **Dr David Friesem** (*Marie Curie Postdoctoral Researcher*)
Tropical micro-archaeology, related to 'hunter-gatherer' use of space

- **Dr Margarita Gleba** (*Senior Research Associate*)
PROCON project; textile economy and urbanization in Mediterranean Europe
- **Dr Robert Harding** (*Wolfson College & University College London*)
Archaeology of south India; archaeology of Buddhism; history of archaeology
- **Dr Yağmur Heffron** (*McDonald Anniversary Fellow*)
Religion and ex-patriate identity in Anatolia
- **Dr Jillian Hilditch** (*Marie Curie Postdoctoral Researcher*)
Multiscalar interaction networks in the Aegean Bronze Age (3100–1200 BC)
- **Dr Jeremy Hill** (*British Museum*)
Head of Research, British Museum
- **Dr Emmanuelle Honoré** (*Newton International Fellow*)
Painting the body; North African rock art
- **Dr Harriet Hunt** (*Research Associate*)
FOGLIP project – Food globalization in prehistory
- **Dr Francesco Iacono** (*Institute of Aegean Prehistory Fellow*)
Late Bronze Age Aegean; central Mediterranean archaeology
- **Dr Pedro Ibanez Gimeno** (*Research Associate*)
ADAPT: Adaptation, dispersal and phenotype
- **Dr Sacha Jones** (*Research Associate*)
Effects of climate change on Neanderthals and Modern Humans in southwest Asia
- **Dr Simon Kaner** (*University of East Anglia*)
Japanese archaeology; cultural heritage, archaeology at the extremities of the Silk Road
- **Dr Rachel King** (*Smuts Research Fellow*)
Centre for African Studies
- **Dr Sheila Kohring** (*Division of Archaeology*)
Material Culture Laboratory
- **Dr Alison Leonard** (*Research Associate, Faculty of History*)
Early Medieval British history and material culture
- **Dr Alice Leplongeon** (*Marie Curie Postdoctoral Researcher*)
Technological variability during the Late Pleistocene in eastern Africa
- **Dr Emma Lightfoot** (*Research Associate*)
FOGLIP project – Food globalization in prehistory
- **Dr Diane Lister** (*Research Associate*)
Genetic analysis of historical barley landraces; spread of cereal cultivation across Europe
- **Dr Daniel Longman** (*Research Associate*)
ADAPT: Adaptation, dispersal and phenotype
- **Dr Giulio Lucarini** (*Marie Curie Postdoctoral Researcher*)
AGRINA – Human transitional pathways towards food production in North Africa
- **Greg Luton** (*English Heritage*)
East of England Regional Director

- **Dr John MacGinnis** (*Independent Scholar*)
Ziyaret Tepe Archaeological project;
Mesopotamia and Eastern Anatolia
- **Dr Alison Macintosh** (*Research Associate*)
ADAPT: Adaptation, dispersal and phenotype
- **Dr Hannah Malone**
(*Junior Research Fellow, Magdalene College*)
Architectural heritage of Fascist Italy; military
cemeteries and political monuments
- **Dr Beatriz Marin Aguilera**
(*Research Associate*)
PROCON project: textile economy and
urbanization in Mediterranean Europe
- **David McOmish** (*Historic England*)
Historic Environment Intelligence Officer
(Development), Heritage Protection Department
- **Dr Jiajun Mei** *Director, Needham Institute*
- **Dr Piers Mitchell** (*Biological Anthropology*)
Palaeopathology/ancient diseases in humans
- **Dr Luc Moreau**
(*Marie Curie Postdoctoral Researcher*)
Early Upper Palaeolithic mobility and
technological decision making; Belgium and
Romania
- **Dr Argyru Nafplioti**
(*Marie Curie Postdoctoral Researcher*)
Early populations in Cretan history; residential
mobility in the Eastern Mediterranean; isotope
geochemistry
- **Dr Sayantani Neogi** (*Research Associate*)
Across Borders
- **Dr Rune Nyord** (*Carlsberg Fellow*)
Conceptions of the afterlife in ancient Egyptian
mortuary religion
- **Dr Hector Orenge** (*Research Associate*)
Two Rains Project
- **Dr Emujobosa Orijemie**
(*Newton International Fellow*)
Long-term history and archaeology of farming
in Tiv, Nigeria
- **Dr Sara Owen**
(*Research Associate, Faculty of Classics*)
Greek archaeology; culture contact and
exchange; Greek 'colonization'
- **Dr Emma Pomeroy**
(*Leverhulme Early Career Fellow*)
Archaeological insight into contemporary
chronic disease risk among south Asians
- **Dr Ronika Power** (*Research Associate*)
FRAGSUS – Fragility and sustainability in
restricted island environments
- **Dr Sandy Pullen** (*Research Associate*)
One River project; ancient land and water use
along the Rio Icama, south-central Andes
- **Dr Miljana Radivojević**
(*McDonald Anniversary Fellow*)
The (Re)volution of early Eurasian metallurgy
- **Dr Alice Samson**
(*British Academy Postdoctoral Fellow*)
Creolization; materiality; settlements; inter-island
relations; indigenous Caribbean
- **Dr Julia Shaw** (*University College London*)
South Asian archaeology
- **Dr Ceri Shipton** (*Research Associate*)
Evolution of stone tool technology throughout the
East African Stone Age
- **Dr Laurence Smith** (*Independent Scholar*)
Suakin Project
- **Dr Pamela Jane Smith** (*Independent Scholar*)
History of archaeology
- **Dr Lindsay Spencer**
(*Research Associate, Faculty of Classics*)
- **Dr Victoria Pía Spry-Marqués**
(*Research Associate*)
Neanderthal and modern human adaptations in
Eastern Europe
- **Dr Philippa Steele**
(*Research Associate, Faculty of Classics*)
Contexts and relations between early writing
systems
- **Dr Jeremy Tanner** (*University College London*)
Greek and Roman art; early Chinese art; sociology
of art; comparative art; art and archaeology
- **Dr Astrid van Oyen**
(*Junior Research Fellow, Homerton College*)
Storage: re-inserting 'things' in the Roman
economy
- **Dr Robyn Veal** (*McDonald Anniversary Fellow*)
Ancient natural resource economics
- **Dr Lacey Wallace** (*Faculty of Classics*)
Archaeology of the western Roman Empire
- **Dr Meike Weber**
(*Leverhulme Centre for Evolutionary Studies*)
Roman pottery (Samian ware)
- **Dr Toby Wilkinson**
(*Junior Research Fellow, Churchill College*)
Near Eastern and Eurasian prehistory, GIS and
computational modelling, trade routes and
economy, landscape survey
- **Dr Rowan Williams** (*Magdalene College*)
Master of Magdalene College
- **Dr Hermine Xhaufclair** (*Fyssen Foundation Fellow*)
- **Dr Yanfu Zu**
(*Mongolia and Inner Asia Studies Unit*)
The Silk Road Project

Field Archaeologists in Residence

- **Craig Cessford**
(*Cambridge Archaeological Unit*)
Medieval and later urban archaeology
- **Dr Matthew Edgeworth**
(*Independent Scholar*)
Archaeology and the Anthropocene

Visiting Scholars

- **Professor Mark Aldenderfer**
(*University of California, Merced*)
Archaeological analysis of foraging societies;
south-central Andes
- **Dr Oscar Aldred** (*Newcastle University*)
North Atlantic archaeology; landscape archaeology
- **Dr Nikolas Arvanitis** (*Independent Scholar*)
European Mediterranean from antiquity to the
contemporary era
- **Dr Andrea Babbi** (*Römisch-Germanisches
Zentralmuseum, Mainz*)
Mediterranean networks and cultural
interactions between Late Bronze Age and
Archaic Age
- **Dr Trisha Biers** (*Independent Scholar*)
- **Dr Giovanni Boschian** (*University of Pisa*)
Human–environment interactions during
prehistory; geoarchaeology
- **Dr Cristina Felici** (*Independent Scholar*)
Medieval archaeology
- **Dr Ricardo Fernandes** (*Kiel University*)
Quantitative diet reconstruction
- **Dr Francesca Fulminante**
(*University of Rome*)
Mediterranean State Formation; origins of Rome
and the Latins
- **Dr Tina Greenfield**
(*Universities of Manitoba and Winnipeg*)
Zooarchaeology
- **Dr Gabriel Gösta** (*University of Göttingen*)
Assyriology
- **Dr Susanna Harris** (*University College London*)
PROCON project; textile economy and
urbanization in Mediterranean Europe
- **Prof. Christine Hastorf**
(*University of California, Berkeley*)
Meaning in the everyday; palaeoethnobotany;
food and foodways; Andean region of South
America; prehistoric agricultural systems; data
interpretation and theory
- **Dr Guo Honggeng**
(*Chinese Academy of Social Sciences, Beijing*)
Assyriology; Old Babylonian legal institutions
and social justice
- **Prof. Sun Keqin**
(*China University of GeoSciences, Beijing*)
Palaeobotany in China in the context of
palaeoclimate, geology and archaeology
- **Prof. Chungkyu Lee**
(*Yeungnam University, Republic of Korea*)
- **Prof. Joseph Lorenz**
(*Central Washington University*)
Ancient and modern human genetic variation
- **Dr Gavin Lucas** (*University of Iceland*)
Theoretical archaeology; archaeology of the
modern world



Visiting Scholars (cont.)

- **Dr Ana Belen Marin Arroyo** (*University of Cantabria*)
- **Dr Mark McGranaghan** (*University of Witwatersrand*)
Interactions between 'hunter-gatherers' and pastoralist, farming or colonial populations
- **Dr John Uche Ngonadi** (*University of Nigeria Nsukka*)
Ancient African Iron working technology and origin; trading routes and patterns in Ancient Bini Kingdom
- **Dr Tracey Rogers** (*University of New South Wales*)
Reconstructing the dietary histories of top predators, leopard seals, in the western Antarctic
- **Dr Xue Shang** (*University of Chinese Academy of Sciences*)
Palynology; vegetation history; human activities during the Holocene
- **Dr Anja Slawisch** (*Independent Scholar*)
Greek art and archaeology in the eastern Mediterranean

Affiliated Scholars

- **Grahame Appleby** (*City of Leicester Archaeologist*)
Bronze Age weapons and metalwork
- **Prof. Ian Baxter** (*Head of Suffolk Business School, UCS*)
Heritage
- **Dr Andrew Bednarski** (*Gonville & Caius College*)
Egyptology
- **Dr Marie-Françoise Besnier** (*Independent Scholar*)
Assyriology
- **Dr James Blinkhorn** (*Research Associate*)
Palaeolithic archaeology; south Asian prehistory
- **Dr Valentina Borgia** (*Independent Scholar*)
PALEOHUNT: Reconstruction of hunting techniques to understand the diffusion of populations in the European Palaeolithic
- **Dr Letizia Ceccarelli** (*Independent Scholar*)
Sanctuaries in Latium vetus, especially the site of Ardea
- **Dr Alexandra Coucouzell** (*Darwin College*)
Greek archaeology c. 1200–500 BC; settlement architecture and the rise of the polis
- **Dr Simon Coupland** (*Independent Scholar*)
Medieval historian; Vikings; ninth-century coinage
- **Dr John Creece** (*Independent Scholar*)
Iroquian personhood and the body
- **Dr Jacob Dunn** (*Anglia Ruskin University*)
Evolution of communications systems and coat colour in primates
- **Dr Delphine Driaux** (*Independent Scholar*)
Ancient Egyptian urban and domestic archaeology
- **Dr Matthew Edgeworth** (*Independent Scholar*)
Archaeology and the Anthropocene
- **Peter French**
Egyptology and ceramics
- **Barrie Fuller** (*Chair, Cambridge Archaeology Field Group*)
Landscape history and field archaeology in a volunteer group capacity
- **Dr Helen Geake** (*National Finds Adviser, Portable Antiquities Scheme*)
Anglo-Saxon archaeology, metal-detectorists
- **Dr Aude Gräzer Ohara**
Archaeological and anthropological study of Egyptian domestic space
- **Dr Nicholas James** (*Independent Scholar*)
- **Dr Sabine Laemmel** (*Independent Scholar*)
Ancient Egyptian pottery
- **Dr Kevin Lane** (*Independent Scholar*)
One River project; ancient land and water use along the Rio Icam, south-central Andes
- **Dr Giulio Lucarini** (*Independent Scholar*)
AGRINA: Human transitional pathways towards food production in North Africa
- **Dr Giuseppina Mutri** (*Independent Scholar*)
NEMO project
- **Dr Jacke Phillips** (*School of Oriental and African Studies*)
Suakin Project
- **Prof. Dominic Powlesland** (*Landscape Research Centre*)
Archaeology of landscapes from the Palaeolithic to the present
- **Dr Ulla Rajala** (*Stockholm University*)
Boundaries and territorial geographies of Archaic and early Roman central Italy
- **Dr Anna Stevens** (*Independent Scholar*)
Reconstruction of urban life, ritual and religion in New Kingdom Egypt through archaeological remains
- **Dr Shadia Taha** (*Wolfson College*)
Cultural heritage; ethnography; qualitative research; community engagement; outreach projects
- **Dr Gemma Tully** (*Archaeolink*)
Community archaeology in Sudan; Visitor Services and Learning Officer at Saffron Walden Museum
- **Dr Robyn Veal** (*Hughes Hall*)
Ancient natural resource economics
- **Isabelle Vella Gregory** (*Independent Scholar*)
Mediterranean prehistory
- **Dr James Walker** (*Independent Scholar*)
Oronsay project
- **Dr Lucy Walker** (*Archaeolink*)
- **Dr Guohua Yang** (*Independent Scholar*)
Heritage

Postgraduate Students

PhD Students (2015–2016)

- **Kelly Accetta** (*Division of Archaeology*)
Thresholds of the Gods: Doorways and Movement in New Kingdom Theban Temples
- **Ethan Aines** (*Division of Archaeology*)
Memory, Landscape, and Place-making Through Votive Deposition in Later Prehistoric Norfolk
- **Helen Alderson** (*Division of Archaeology*)
How did Pacific Islanders adapt to Global Interconnectivity? Dynamic Kosraean Identities, Materialised in an Increasingly Cosmopolitan World (1824–1924)
- **Pablo Alonso Gonzalez** (*Division of Archaeology*)
Nation-building and Cultural Heritage in Post-colonial Cuba (1898–2014)
- **Ting An** (*Division of Archaeology*)
Did Chinese Millet Travel Together with Painted Pottery before the 2nd millennium BC?
- **Robert James Anstey** (*Division of Archaeology*)
Precontact Hunter-Gatherer Interactions in the Strait of Belle Isle, Newfoundland and Labrador, Canada: Chronology, Mobility and Technology, c. 3000–1200 BP
- **Daniela Arroyo Barrantes** (*Division of Archaeology*)
The Origins of Urban Craft Production in Mesopotamia: Making and Discarding Pottery in Tell Brak's Outer Town
- **Flaminia Bartolini** (*Division of Archaeology*)
Rome's Divided Memory: Nazi-Fascist Heritage and Post-war Memory Construction in Italy
- **Jennifer Bates** (*Division of Archaeology*)
Social organisation and Change in Bronze Age South Asia: A Multi-proxy Approach to Urbanisation, Deurbanisation and Village Life Through Phytolith and Macrobotanical Analysis
- **Sebastian Becker** (*Division of Archaeology*)
Birds on Bronzes: A Study of Religious Branding in Later Prehistoric Europe
- **Jeremy Bennett** (*Division of Archaeology*)
Managing the Agrarian Environment in Prehistoric Malta and Gozo
- **Harry Blackmore** (*Division of Archaeology*)
An Evaluation of Models of Heterarchy and State Formation on the Korean Peninsula, with Reference to the Kingdom of Baekje
- **Kathryn Boulden** (*Division of Archaeology*)
A Bioarchaeological Reassessment of Livestock Management Practices between the Neolithic and the Roman Period in Wessex
- **Meghan Bowe** (*Division of Archaeology*)
Reconstructing Cultural Heritage in Post-War Northern Germany: A Long-Term Process of Negotiating Place and Memory
- **Pippa Browne** (*Division of Archaeology*)
Object (Inter)Actions: Assemblages of Ancient Egyptian Foundation Deposits

- **Emma Brownlee** (*Division of Archaeology*)
Change and Continuity of Burial Practice: A Study of Cultural and Religious Cohesion in Early Medieval Europe
- **Emma Chapman** (*Division of Archaeology*)
Children and Child Burial in Medieval England
- **Petros Chatzimpaloglou** (*Division of Biological Anthropology*)
Geological Reconnaissance of Potential Lithic Sources in Maltese Islands. A Case Study of Chert and Flint
- **Sarah Anne Clegg** (*Division of Archaeology*)
Capturing the Standards: Capacity Systems in Their Social And Economic Context in Third Millennium BC Mesopotamia
- **Elizabeth Cohen** (*Division of Archaeology*)
Managing and Interpreting Greece's Ottoman Heritage
- **Margaret Anderson Comer** (*Division of Archaeology*)
Gulag Memory, Commemoration, and Politics in Post-Soviet Russia
- **Samantha Cox** (*Division of Archaeology*)
Growth And Development Of Shape Variation In The Human Pelvis
- **Aaron Critch** (*Division of Archaeology*)
'How are Princely Gifts Repaid by Your Powerful Friends?': 'Ring-money' and the Appropriation of Tradition in Insular Viking Politics, AD 900–1065
- **Matthew Neale Dalton** (*Division of Archaeology*)
The Materialisation of New Kingdom Egyptian Conceptions of Space in Domestic Living Surfaces at Amara West
- **Bela Dimova** (*Division of Archaeology*)
A Post-Colonial View of Thrace: Thracian–Greek Interactions from the Early Iron Age to the Early Hellenistic Period
- **Jenna Mae Irene Russum Dittmar** (*Division of Biological Anthropology*)
An Archaeological Examination of Human Dissection and its Role in Anatomical Education in England from 1600–1900
- **Ningning Dong** (*Division of Archaeology*)
Animal Classifications in Prehistory – Case Studies in North China during the Neolithic
- **Sarah Catherine Evans** (*Division of Archaeology*)
Communication and Information Storage in the Upper Palaeolithic: An Analysis of Geometrically Engraved Bone and Antler Objects from Western Europe
- **Renate Fellinger** (*Division of Archaeology*)
Women in the Demotic Legal Landscape of Ptolemaic Egypt (332–30 BC): Participation, Property Rights and Cross-cultural Influence as Reflected in Documents for Money from Upper Egypt
- **Silvia Ferreri** (*Division of Archaeology*)
Symbols as Active Conveyors of Meaning: Kudurrus of Southern Mesopotamia in the Second and First Millennium BC
- **Lindsey Jo Fine** (*Division of Archaeology*)
Paths to Social Complexity: A Multiscalar Examination of Land Passes in Central Greece
- **Katherine Hall** (*Division of Archaeology*)
All the Live-Long Day: Developing Time-Space Maps to Structure Archaeological and Palaeo-environmental Data Relating to the Mesolithic–Neolithic Transition in Southern England
- **Emily Hallinan** (*Division of Archaeology*)
Variation and Modernity in Stone Age Landscape Use in the Western and Northern Cape, South Africa
- **Benjamin Samuel Paul Hinson** (*Division of Archaeology*)
Coming of Age or an Age of Becoming? The Role of Childhood in Identity Formation at Deir El-Medina, New Kingdom Egypt
- **Penelope Jean Jones** (*Division of Archaeology*)
Climate Change, Water Stress and Agriculture in the Indus Civilisation, 3000–1500 BC
- **Kevin Kay** (*Division of Archaeology*)
Materializing Human Action: Embedding Practice, Economy, and Agency at Neolithic Çatalhöyük, Turkey
- **Cynthia Larbey** (*Division of Archaeology*)
There Are Significant Phylogenetic Evolutionary Differences in Human Adaptation to Diet – How Does That Correlate with a Deep History of Processed Plant Food Consumption?
- **Minghao Lin** (*Division of Archaeology*)
The Early History of Cattle Traction in North China
- **Alex Loktinov** (*Division of Archaeology*)
An Assessment of Continuity and Change in the Legal System of Ancient Egypt from the Old to the New Kingdom
- **Eduardo Machiado-Murillo** (*Division of Archaeology*)
The Impact of Landscape Instability on Pre-Columbian Settlement in the Upper Amazon Basin: Geoarchaeological Investigation of Domestic Sites and Drained Field Agriculture in San Ignacio De Moxos, Eastern Bolivia
- **Joanie Meharry** (*Division of Archaeology*)
US Archaeology and Cultural Diplomacy in Afghanistan, Iran and Iraq
- **Leanne Joy Munroe** (*Division of Archaeology*)
Narratives of Transatlantic Slavery in British Museums
- **Herman Muwonge** (*Division of Biological Anthropology*)
An Investigation into the Late Quarternary Prehistory of the Albertine Rift Valley, Uganda
- **Chioma Vivian Ngonadi** (*Division of Archaeology*)
The Origin and Development of Farming in Lejja, Southeastern Nigeria c. 3000 BP
- **Janine Therese Pello Ochoa** (*Division of Archaeology*)
Endemicity, Indigeneity and Zooarchaeology: Palaeozoological Reconstruction and Ecological Knowledge Systems in Philippine Island Environments
- **Shawn Alden O'Donnell** (*Division of Archaeology*)
Human–Rainforest Interactions in Island Southeast Asia: An Ethnopolynological Approach to Holocene Vegetation History in Sarawak (Malaysian Borneo) and Palawan (Western Philippines)
- **Ian Ostericher** (*Division of Archaeology*)
Human–Environmental Interaction, Holocene Landscape Development and Sustainable Pastoralism in the Forest-Steppe, Tarvagatai River Valley, Bulgan Aimag, Mongolia
- **Sarah Paris** (*Division of Archaeology*)
What Determines the Choice of Colour in Pleistocene Hominins?
- **Eóin Wesley Parkinson** (*Division of Archaeology*)
Body Size, Habitual Behaviour and Skeletal Biomechanics in Neolithic Gozo, Malta
- **Georgina Peters** (*Division of Archaeology*)
Society and Space; Rethinking the Reciprocal Relationship between Iron Age People and the Landscape They Inhabited
- **Elizabeth Gail Pratt** (*Division of Archaeology*)
The Livingstones: Knowing Prehistoric Archaeological Heritage in 21st Century West Cornwall
- **Natalia Przelomska** (*Division of Archaeology*)
Ultrasonic Fragmentation of DNA For Library Prep, Using a Diagenode Bioruptor
- **Claire Felicity Ratican** (*Division of Archaeology*)
The Other Body: An Exploration of Perceived Violence, 'Othering' and Identity in Multiple Burials across Viking Age Scandinavia, Britain and Ireland
- **Rachel Jean Reckin** (*Division of Archaeology*)
High Altitude Archaeology in the Absaroka/Beartooth Mountains of Montana and Wyoming
- **Wannaporn Rienjang** (*Division of Archaeology*)
Honouring Body: Relic Cult Practice in Eastern Afghanistan with Comparison to Dharmarajika Pakistan
- **Michael Benjamin C. Rivera** (*Division of Biological Anthropology*)
Exploring Diachronic Changes in Human Activity, Diet and Health in the Prehistoric Baltic Context
- **Kirk Kendrick Roberts** (*Division of Archaeology*)
Decoding the Language of the City: An Agent-based Approach to Mesopotamian Urbanism
- **Calum Gavin Robertson** (*Division of Archaeology*)
Here Lies Our Land: Heritage, Identity, and Clanship in Contemporary Scotland
- **Sarah Elizabeth Roe** (*Division of Archaeology*)
Responses to Environmental Conditions in Domestic Architecture
- **Jaap Saers** (*Division of Archaeology*)
Ontogeny and Functional Adaptation of Human Pedal Trabecular Bone
- **Christoph Schmidhuber** (*Division of Archaeology*)
Childhood in Ancient Iraq: Perspectives from Babylonia in the 2nd Millennium BC
- **Susan Carol Rothenberg Shay** (*Division of Archaeology*)
The Right to Control the Land: Heritage and Self-Determination by Native Hawaiians
- **Francesco Sponza** (*Division of Archaeology*)
Scales of Interaction across the Taiwan Strait between 5000 BP and the Early Metal Age



Postgraduate Students (cont.)

- **Sarah Jane Strange** (*Division of Archaeology*)
Craniometric Variation and Immigration in Ancient Egypt
 - **Meghan Elizabeth Strong** (*Division of Archaeology*)
Illuminating the Path of Darkness: Light in Ancient Egyptian Ritual
 - **Akshyeta Suryanarayan** (*Division of Archaeology*)
Cooking, Eating, Being: Investigating Consumption and Foodways of Indus Civilisation Populations through Ceramic Residue Analysis
 - **Lynette Talbot** (*Division of Archaeology*)
The Languages of Pathology in Akkadian
 - **Yingwen Tao** (*Division of Archaeology*)
Heritage Management of Miao Villages in Guizhou Province
 - **Ana Tavares** (*Division of Archaeology*)
State, Individual and Society: An Architectural Perspective on Early Interactions, with Particular Reference to the Heit El-Ghurab and Khentkawes Sites at Giza, Egypt
 - **Helen Taylor** (*Division of Archaeology*)
Cultural Integration in Intermontane Zones: Cultural Variability and the Socio-Economics of Ceramic Production in Highland Southwest Iran during the Fifth Millennium BC
 - **Jess Emma Thompson** (*Division of Archaeology*)
Modes of Burial in Late Neolithic Malta: Taphonomic Analysis of Human Remains from the Brochtorff Xagħra Circle and Xemxija Tombs
 - **Olga Igorevna Vinnichenko** (*Division of Archaeology*)
The Aramaic Influence on the Neo-Assyrian Dialect of Akkadian
 - **Yiru Wang** (*Division of Archaeology*)
The Origins Of Sheep And Goat Domestication In Western China
 - **Kimberley Cecile Watt** (*Division of Archaeology*)
A Sign of the Times: Administration and People during Political Change in Late Eighteenth Dynasty Egypt
 - **Emily Wright** (*Division of Archaeology*)
Inhumation and Cremation Practices in the Mediterranean, 1500–500 BC
 - **Minjae Zoh** (*Division of Archaeology*)
The Impact of Territorial Politics on Heritage Sites in South Korea during the Military Dictatorship Era
- MPhil Students (2015–16)**
- **Sergio Alarcón Robledo** (*Division of Archaeology*)
Creativity and Religious Practice: The Origins and Evolution of Egyptian Hypostyle Halls in the New Kingdom
 - **Robert Barratt** (*Division of Archaeology*)
Interpreting and Presenting Archaeological Sites Using 3D Reconstruction: Virtual Exploration of the Brochtorff Xagħra Circle in Gozo
 - **Carlotta Belluzzi** (*Division of Archaeology*)
Diverse Strategies in Imperial Administration in Etruria: As Seen through Field Survey
 - **Andres Bustamante** (*Division of Archaeology*)
El Dorado in the Vaults: Notions of 'Public' and 'Private' Heritage in Colombia's Banco de la República
 - **Shengdan Cai** (*Division of Archaeology*)
Transformed Regime, Reimagined Past: The Japanese Colonial Heritage in Taiwan before and after the 1990s
 - **Francesca Calarco** (*Division of Archaeology*)
Diversification or Decolonization? Representations of Slavery in Museums in the United States
 - **Sophia Carreira-Wham** (*Division of Archaeology*)
The Blitz: Myth and Memorial in Clydeside
 - **Nekbet Corpas** (*Division of Archaeology*)
Alcala de Henares: Whose Heritage?
 - **Donald Crystal** (*Division of Archaeology*)
Beyond Stone: Megalithic Landscapes and Social Transformation in Iron Age Thrace
 - **Ariana Fernandez** (*Division of Archaeology*)
Is Knowledge Power? Exploring the Effect of Context on Perceptions of Authenticity
 - **Adam Garzoli** (*Division of Archaeology*)
A Victory against War Itself: The Heritage of Peacemaking in San Francisco's Civic Center
 - **Danielle Gilbert** (*Division of Archaeology*)
Collecting Places: Migration Heritage in the Museum
 - **Emma Hall** (*Division of Archaeology*)
Glass in Late Bronze Age Production and Trade as Seen through Egyptian and Mesopotamian Elite Contexts
 - **Katie Haworth** (*Division of Archaeology*)
Commemorating the Final Phase Dead: Burials and Grave-goods in Seventh-century East Anglia
 - **Sara Knutson** (*Division of Archaeology*)
Viking Landscapes: Diasporic Identities and Transformations in Viking Age Agricultural Landscapes
 - **Anne Kremmer** (*Division of Biological Anthropology*)
Insights Into A Late Pastoral Neolithic Population From Ngorongoro, Tanzania
 - **Maxwell Lopez** (*Division of Archaeology*)
Cities under Siege? Investigating the Role of Warfare in Early Historic Period in South Asia
 - **Andrew Lorey** (*Division of Archaeology*)
Managing Built Heritage after Natural Disaster: The Politics of Kastom and Disaster Reconstruction in Twenty-First Century Vanuatu
 - **Laura Malric-Smith** (*Division of Archaeology*)
Assyrian Provincial Cities: Monumentality and Architecture in the Lower Town
 - **Felicity Mcdowall** (*Division of Archaeology*)
'Grave Implications: The Development Of Symbolic Funerary Behaviour In The Palaeolithic'
 - **Iain Mclean** (*Division of Archaeology*)
Human Intervention in the Landscape through Ancient Mining: A Regional Study Applying Satellite Imagery
 - **Lisa-Elen Meyering** (*Division of Archaeology*)
What It Means to be Human in Rock Art: An Analysis of Anthropomorphic Body Types within the Bronze Age Rock Art of Bohuslän, Southern Sweden
 - **Chase Minos** (*Division of Archaeology*)
Insularity in the Hellenistic and Roman Cyclades, 330 BCE TO 600 CE
 - **Rebecca Mitchell** (*Division of Archaeology*)
'Rooting' and 'Routing' Heritage and Homeland: London's Ukrainian Diaspora
 - **Sara Morrisset** (*Division of Archaeology*)
Conduits of Power: Ritualized Displays of Water at the Inka Site of Saksaywaman
 - **Jana Muschinski** (*Division of Archaeology*)
Investigating Spatial Use through the Distribution of Faunal Remains: A Study of the Interior and Exterior Cave Chambers of the Prehistoric Site of Pupicina, Croatia
 - **Sarah Nankivell** (*Division of Archaeology*)
Speaking of Sledgehammers: Analysing the Discourse of Heritage Destruction in the Media
 - **Yvonne O'Dell** (*Division of Archaeology*)
Emotions, Affect, and Andean Ontologies of Death: Understanding Emotion in the Archaeological Record
 - **Annabelle Oliva** (*Division of Archaeology*)
Representing Uncertainty in Archaeological Narratives
 - **Peerapat Ouysook** (*Division of Archaeology*)
Analysing the Babylonian Theodicy
 - **Isabel Peng** (*Division of Archaeology*)
Women And Inheritance In Ancient Mesopotamia During the 2nd Millennium BC
 - **Hailey Perelman** (*Division of Archaeology*)
Augmented and Virtual Reality Applications and Changing Traditional Museum Logics
 - **Grace Tribble** (*Division of Archaeology*)
Studies in Characterisation in Mesopotamian Literature
 - **Rocio Vidal** (*Division of Archaeology*)
How did Social Status Affect Diet During the Late Avar Period? Stable Isotope Analysis of Human and Animal Skeletal Remains from Nuštar Cemetery, Eastern Croatia
 - **Miriam Wallner** (*Division of Archaeology*)
Developments in Visual Language and Social Complexity during the Bronze Age: The Sigillographic Evidence from Central Asia
 - **Faith Williams** (*Division of Biological Anthropology*)
Analysis of Roman Period Coprolites from the Latrines of the Imperial Baths at Sagalassos, Turkey, for Intestinal Parasite Eggs

Material Culture Laboratory

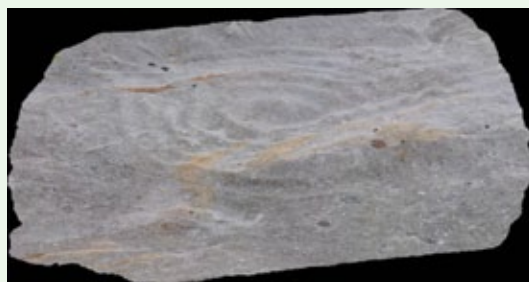
JOHN ROBB, ELIZABETH DEMARRAIS & SHEILA KOHRING

The Material Culture Laboratory provides an important space for the analysis and theorizing of material culture in the past. Current members of the laboratory are exploring topics including the varied nature of urbanism and architecture, craft production and society, the materiality of identity construction, the spread of new technologies, community practices and funerary actions. Laboratory members are conducting research in north Africa and southwest Asia (including the regions labelled ancient Egypt and Mesopotamia), southern Asia (India, Myanmar, Pakistan), Melanesia, the Americas (Peru, Argentina, Bolivia) and Europe (Britain, Italy, Scandinavia, Greece, the Balkans and Malta). The *Thinking About Things* (TAT) reading group continued to be a strong aspect of laboratory life with the theme of 'Innovation and Invention' resulting in many thoughtful and constructive debates. In 2016–2017, the active post-graduate community in the laboratory will set a new thematic agenda for the group.

The laboratory hosted a special series of guest lectures in 2015–2016 including talks in the Michaelmas term by Susan

Alt (Indiana University) entitled 'Structural violence, women's bodies and atmospheres of the Sacred' and Mark Hauser (Northwestern University) on 'Environmental implications and cultural politics of water use in slave colonies'. We also hosted Tim Pauketat (University of Illinois) for a lunchtime seminar for students and post-doctoral researchers as a follow-up to his Distinguished Visiting Lecture 'Being and Nothingness in pre-Columbian North America'. In the Lent term the series continued with Chris Fowler (Newcastle University) on 'Ontology, cosmology and material culture in the Neolithic and Early Bronze Age of Britain and Ireland' and Michael Given (Glasgow) exploring 'Sherds, mud and manure: environmental materiality and the life of soil'. In the Easter term we hosted John Barrett (Sheffield) questioning 'Post-Darwinian evolution: some archaeological implications' and culminated in a final lecture by Hans Peter Hahn (Frankfurt) on 'The Obstinacy of Things'. These special lectures provided a forum for discussion and debate, not only by lab members, but by the wider archaeology and anthropology community.

Finally, our 2015–2016 year has seen some great successes! Notably, Dr Astrid Van Oyen has moved to Cornell University as assistant professor in the Department of Classics. We wish her and other visiting members success!



Left: Abandoned early twentieth-century farmhouse, Bova, Calabria: John Robb's field survey project on settlement and politics in Calabria from the Neolithic to the present. Above: 3D reconstruction of Neolithic rock art, Chatton Park Hill, Northumbria, part of John Robb's overall project of social history of art in prehistoric Europe. Right: Exploring fingers as tools in Bronze Age pottery.



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Pippa Browne
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Mauro Puddu
Rachel Reckin
Wannaporn Rienjang
Sarah Roe
Francesco Sponza
Meghan Strong
Akshyeta Suryanarayan
Ana Tavares
Jess Thompson



Grahame Clark Zooarchaeology Laboratory

PRESTON MIRACLE

The Grahame Clark Laboratory continues to thrive. As always, there have been comings and goings in the 'Clark Lab'. In 2016 Minghao Lin, PhD in hand, returned to China to disseminate results of his research supported by a Wenner-Gren 'Engaged Anthropology Grant', while closer to home, Pía Spry-Marqués joined the Communications Department at Fitzwilliam College, Cambridge. We welcomed back Dr Ana Marin-Arroyo (Universidad de Cantabria) who joined us as a visiting scholar.

Preston Miracle's field research in coastal Croatia continued in 2015–16. He and his team (including David Redhouse, Computing Officer, Division of Archaeology, and Cambridge students Rocio Vidal-Ronchas, Tansy Branscombe, Rain Robertson, Amaris

Alcock, and Emily Young) excavated Mesolithic and Late Upper Palaeolithic deposits in Vela Spila Cave (Korčula, Croatia) for six weeks in August and September 2016. They opened a large surface of about 20 sq m, uncovering a series of well-preserved hearths dating to the Mesolithic period, and vast quantities of mollusc shells (including pierced *Columbella rustica*), fish bones, occasional stone tools, and surprisingly frequent bone awls and points. The latest Upper Palaeolithic sediments, by contrast, were almost sterile. These remains will significantly aid our attempts to understand the relationships between human activities and environmental changes across the Pleistocene-Holocene transition. Preston is also co-directing and coordinating a three-year Horizon 2020 'Twinning' Project—'Mend the Gap' <<http://mendthegap.agr.hr/>>. This project 'twins' the Universities of Cambridge (McDonald Institute) and Pisa (Departments of Biology and Earth Sciences) with a Croatian research consortium, CrEAMA, that includes archaeologists, biological anthropologists, geologists, botanists, palaeontologists and geneticists from seven institutions. 'Mend the Gap' was the top-ranked application in Europe in the 2015 funding round. Project activities will include a number of academic visits and exchanges. The archaeology of Vela Spila is the main case study/focus of the project; the site's heritage, significance to the local community and potential contribution to sustainable tourism are being examined by a team led by Patricia Duff from ArchaeoLink. The 'Mend the Gap' project will run from 2016–19 and has an overall budget of just under €1 million.

Jessica Rippengal has been continuing work with ACA over the summer, providing faunal expertise for Year 9 school children involved in Higher Education Field Academies in East Anglia. She, along with Vida Rajkovača, represented Cambridge and the Grahame Clark Laboratory at the National Zooarchaeological Reference Resource workshop in York in May 2016. At this meeting, details of a future searchable database of zooarchaeological reference collections were discussed, and a plan was developed to achieve an initial version of this valuable resource.

Katherine Boyle has continued with her research on hunting during the European Neolithic, focusing on the procurement and uses of red deer in northern Italy and marine mammals in northwestern France.

In October 2015, Marjolein Bosch started her Marie Skłodowska-Curie fellowship on 'Early Upper Palaeolithic personal ornaments and behavioural adaptations' (EU-Beads). In this project, she is investigating symbolically mediated behaviour ranging from the selection of shells



Rocio Vidal-Ronchas and Amaris Alcock excavating at Vela Spila, Croatia.

to produce beads, to their use in past hunter-gatherer societies. To distinguish natural from anthropic perforated shells, she began a 3D scanning project of several shell taxa to map the structural strong points and weaknesses. She has also collected a modern death assemblage or 'thanatocoenoses' to investigate natural perforation patterns for *Columbella* shells. She has continued to participate on field projects in East Africa (ERC-funded 'In-Africa project', PI Marta Mirazon Lahr) and Romania (Mitoc-Malu Galben research project, PIs Pierre Noiret, Vasile Chirica and Philip R. Nigst).

Vida Rajkovača (Cambridge Archaeological Unit) worked on a number of faunal assemblages recovered from large-scale investigations by the CAU. The site of the future town of Northstowe revealed extensive Iron Age and Anglo-Saxon occupation and the faunal remains play a crucial part in understanding this complex landscape. The Must Farm project also offered some fantastic results, the first glimpse at the animal bone showing the unusual character of everyday activities in the Fens during the Bronze Age.

Yiru Wang is in China making corrections to her PhD dissertation on 'Origins of Sheep and Goat Domestication in Western China'. Ningning Dong (4th-year PhD) is finishing the writing of her PhD dissertation on ethno-taxonomies in prehistoric China. Janine Ochoa (2nd-year PhD) is collecting zooarchaeological data for her PhD dissertation in the Philippines (Palawan and Luzon Islands). This has involved museum work on collections, as well as excavations at the Late Pleistocene cave site of Pilandok. The field research has been supported by a number of grants, including one from the Wenner-Gren Foundation. Jana Muschinski and Rocio Vidal-Ronchas joined the lab for the year as part of

their MPhils in archaeological science. Jana completed a very nice dissertation with the title 'Investigating spatial use through the distribution of faunal remains: A study of the interior and exterior cave chambers of the prehistoric site of Pupičina, Croatia', while Rocio wrote one of her projects on 'Palaeoenvironmental Interpretation of the Vicinity Surrounding Nugljanska Cave, Istria, Croatia Through the Analysis of Microfaunal Remains'. It was a pleasure having them in the Clark Lab, and we wish them all the best for the future.

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Jessica Rippengal (*Zooarchaeology and Chief Technician*)

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Dr Katherine Boyle

Natasha Dodwell

Dr Ana Marin-Arroyo

Dr A.Nafpiloti

Vida Rajkovaca

Dr V. Pia Spry-Marques

PhD Students

Ningning Dong

Janine Ochoa

Yiru Wang



Janine Ochoa on her excavation in Pilandok Cave in Palawan Island, Philippines.



Collection of a modern death assemblage of Columbelloid shells in a rocky-shore intertidal setting.

George Pitt-Rivers Laboratory of Archaeobotany and Bioarchaeology

MARTIN JONES

This has been another year of new directions at the interface between archaeobotany and molecular archaeology. Our current projects reach across Africa, Asia, Oceania and Europe, with researchers visiting from each of those regions (and others). In addition, we are pleased to be involved in the remarkable archaeobotanical research closer to home at Must Farm.

Rachel Ballantyne has been coordinating the environmental sampling programme on the Must Farm excavations by the Cambridge Archaeological Unit (p. 6). Our laboratory facilities are supporting analysis of the plant macrofossils and fibres from the Bronze Age settlement, in liaison with Drs Margarita Gleba and Alan Clapham.

In Africa, the lab group's work ranges from Cynthia Larbey's research on the processing of Middle Stone Age roots and tubers (through parenchyma analysis) through to the work of Emuobosa Orijemie and Chioma Ngonadi on agricultural developments in recent millennia in Nigeria. Emuobosa is bringing together archaeobotany and geoarchaeology in order to understand the relationship between farming and climate over the past 1500 years. Chioma's PhD research seeks to examine the development of farming practices associated with iron-working communities in Nigerian prehistory with reference to the site of Lejja, southeastern Nigeria, c. 3000 BP. As part of his PhD within the ERC funded *IN-Africa Project*, Peter Griffith has come to the lab to explore the potential of phytolith analysis (with the guidance of Jennifer Bates). Peter is using these, along with sedimentological studies (with the guidance of Prof. Hema Achyuthan, Anna University, India) to explore Quaternary vegetation dynamics in the Central Rift Valley in Kenya.

North Africa and Europe have also been the foci of Robyn Veal's continuing research on charcoal assemblages. This year Robyn has worked on material from: Utica (Roman Africa); Castleporziano (Roman Lazio, Italy); Portus (Rome's ancient port); and Silchester (Iron Age–Romano-British). Robyn has also been working towards examining and curating the late Oliver Rackham's material from Wales and Hayley Wood, to help bring Prof. Rackham's unfinished work to publication.

In Europe, Emanuela Cristiani has started working on the ERC-funded *Hidden Foods* project. So far, she has



An ear of emmer wheat from Must Farm.

been working on the identification of plant micro-remains in ancient tartar extracted from Holocene foragers of the Balkans in order to understand the role of plants in their diet and daily activities (e.g. basketry). This year her work focused on the sites of Vlasac and Lepenski Vir in Serbia and Vlakno Cave in Croatia.

Projects have been under way in several parts of Asia. After completing her PhD thesis on Indus agricultural strategies (c. 3200–1500 BC), Jennifer Bates has begun her Trevelyan Research Fellowship at Selwyn College. Her research into the impact of social expansion in the Indus borders region has begun to uncover the vast diversity of both agriculture and food choices in this region, as well as throwing up new methodological challenges that will need to be addressed across the Indus region in future research. Working closely with Jennifer and Cameron Petrie's *Land, Water and Settlement*, Penny Jones is close to completion of her PhD research into the climatic and hydrological context of early grain agriculture. Also working on the Indus Civilization, and bridging ceramic studies, archaeobotany, zooarchaeology and biomolecular approaches, Akshyeta Suryanarayan is investigating vessel usage and cooking practices in urban and rural Indus settlements with the use of ceramic lipid analysis. Her PhD will be the first to use this technique in South Asian archaeology.

Ting An has been re-examining prehistoric millet records from charred assemblages and grain impressions, from both east and west Eurasia. Alongside that study, she has also been scrutinizing



ODESSA ARCHAEOLOGICAL MUSEUM

Ting An looking with Galyna Pashkevich and Vlad Petrenko for neolithic grain impressions to reassess early western records of millet.

the evidence for early ceramic production in both regions, to establish whether any early ceramic markers are plausible proxies of early east–west contact.

From the University of the Chinese Academy of Sciences, Xue Shang has joined us for a year, both to bring her expertise on Chinese quaternary science through pollen and charcoal analysis and to learn from us and our specialisms. She has been working with lab colleagues to collate macrofossil records for buckwheat, one of the East Asian crops with a deep history of westward spread.

In the Philippines, Hermine Xhaufclair has been exploring the relationship between prehistoric humans and the plant world through functional analysis of stone tools. To do so, she is conducting use-wear and residue analyses. This year, she implemented a new sampling strategy at the site of Ille Cave, Palawan, Philippines, to address contamination issues. Oceania is one of the many global arenas for Andrew Clarke's important work on the place of bottle gourds in prehistory.

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Catherine Kneale (*Lab Manager*)

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Andrew Clarke
Emanuela Cristiani
Emuobosa Akpo Orijemie
Xue Shang
Robyn Veal
Hermine Xhaufclair

PhD students

Ting An
Peter Griffith
Penny Jones
Cynthia Larbey
Chioma Ngonadi
Akshyeta Suryanarayan



PALAWAN ISLAND PALAEOHISTORIC RESEARCH PROJECT

Hermine Xhaufclair with student at the site of Ille Cave, Palawan, Philippines, taking sediment samples underneath and near a recently discovered stone tool.

Charles McBurney Geoarchaeology Laboratory

CHARLES FRENCH

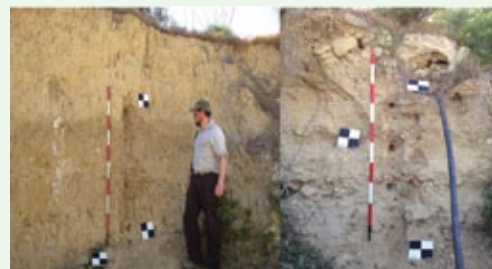
The laboratory has had another successful year with great projects and interesting visiting scholars and PhD students here at various times during the year. First of all, many congratulations to Kate Boulden, Katie Hall and Ivana Ozán, who were all awarded their PhDs in 2016. Dr David Friesem arrived from Israel as a Marie-Curie post-doctoral fellow. João Araújo Gomes came from Lisbon to complete slide work on coastal wetland deposits on the lower Tejo valley of Portugal; Susanne Cereda, now at the University of Vienna, for tell site work in Turkey; Dr Dominic Stratford came from the University of Witwatersrand to process sample blocks from a series of Neanderthal-period cave sites in South Africa, as did Juan Carlos Salamanca Mateos from Madrid for Erasmus-funded training in making large thin sections. Dr Sandy Pullen, whose work with the Ica valley project was completed at the end of February 2016, has now gone back into commercial archaeology in the region.

The McBurney hosted a two-day workshop in late January as part of the Geoarchaeological Laboratory Network with the geoarchaeologist research groups from the Universidad de La Laguna in Tenerife and Tübingen University. Techniques and case studies of landscape, settlement, experimental and geo-chemical approaches were shared and discussions started about preparing a European Training Network for geoarchaeology.

Laboratory members took part in fieldwork in East Anglia and Wessex in England, Israel, India, Bosnia, Serbia, Sardinia, northern Italy, Gozo and Malta, Nagaland, Mongolia, China, Nigeria, Ethiopia, Sudan and Peru, with a few examples mentioned here and elsewhere in this annual report. In addition, Tonko Rajkovaca and Ian Ostericher led an



2. Excavations of the interior of the temple at Santa Verna, Gozo, showing the pre-temple reddish brown, clay-enriched buried soil.



3. Marsalforn and Ramla colluvial valley profiles and OSL sampling, with Jeremy Bennett for scale.

archaeological field-trip to a number of significant prehistoric sites in Serbia such as Lepenski Vir and Drenovac (1) for the Part IIA undergraduates this past Easter.

The Laboratory continued its collaboration with the FRAGSUS project in Gozo and Malta (PI Caroline Malone, Queen's University Belfast) (2–5), as reported in more detail on p. 47.

A new collaborative project with Professor Francesco Menotti (University of Bradford) and Dr Joachim Köninger (Freiburg) has begun to investigate the second-millennium BC Bronze Age lake dwelling on the western side of Lake Viverone (6). The 6000+ posts are preserved below about 1.2 m of lake-water, about 50 m out from the present-day dry land edge. Augering by Charles French, Sean Taylor and Rob Scaife has indicated that the lake margin was at least 200 m further inland at the time of use of this piled settlement site, and that the land has encroached over this lake margin since with the development of an alder fen and reed marsh with deep peat deposits.

The laboratory's role on the most exciting excavations of the waterlogged earlier first-millennium BC Late Bronze



1. Collapsed Neolithic mud-brick building debris at Drenovac, Serbia.

I. OSTERICHER

C. FRENCH

C. FRENCH

C. FRENCH



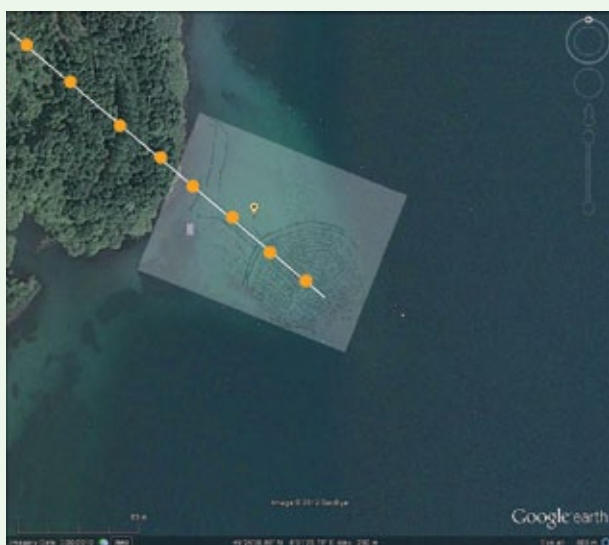
4. Tim Kinnaird and Jeremy Bennett taking OSL samples from the pre-Skorba soil sequence in Malta

C. FRENCH



5. Tim Kinnaird (SUERC, Glasgow) conducting OSL profiling measurements through a hillwash sequence in the Marsalforn valley, Gozo.

J. KOENINGER



6. Aerial view and plan of the post-piles at the Lake Viverone dwelling showing the augering transect.



C. FRENCH

7. Must Farm house 2, with turf and alluvial clays, actual and thin sections, with lower right-hand frame being a possible pseudomorph of thin organic matting (all 5 mm frame width; two frames on lower left in cross polarized light; lower right frame in plane polarized light).

Age settlement of Must Farm (pp. 5–6) near Peterborough in Cambridgeshire (7, upper right) has been mainly to look at potential floor and building collapse deposits preserved in amongst the timbers. The upper part of the ‘occupation horizon’ is composed of a mixture of fine to very fine quartz sand with abundant fragments of humified organic matter and common small pieces of wood charcoal, with up to half of the fabric comprised of pore space where there was once water and air. In contrast, the lower part of this horizon is composed of alternating micro-laminae of very fine to fine quartz sand and humified organic matter. This is the result of deposition by slow-moving water and organic accumulation in very shallow standing water on the upper/outer edge of the roddon channel where the site was situated. So it looks as if the Late Bronze Age palisaded structure was built on the southern upper edge of a partially infilled roddon channel. This occasionally held shallow water, but most of the time was just damp and muddy. Even though the artefact assemblage and many horizontal wooden elements of the site are abundantly present in a single ‘occupation horizon’, there is no evidence from the thin-section analysis to suggest that this was a living surface, or that it contains collapsed floors. Rather it is an accumulation zone from the dwelling above to where the artefacts and building materials have dropped down or sunk after a huge fire.

In amongst and below the collapsed roof timbers of each house at Must Farm were a number of what looked like pale grey clay and black/crumby turf deposits, both as irregularly shaped and sized ‘clods’ and sometimes combined/adhering



together in larger aggregates or horizontal zones (7, upper frames). The 'grey clay' lumps in fact vary from being a calcitic sandy silt to a striated silty clay (7, lower left), both of which are indicative of nearby alluvial silty clay overbank flood deposits. The formation of the calcitic component is ostensibly a secondary process as a result of the drying out of the silty clay matrix. The irregular patches of black organic material are composed of fine pellety aggregates of black, highly humified organic matter with greater or lesser amounts of very fine to fine quartz sand (7, lower centre). This black crumb-like structure is indicative of turf that has been repeatedly mixed or bioturbated by the soil fauna. This turf material also contains a minor but distinctive phosphatic-iron content, derived from animal waste and rotting organic matter, which assists in corroborating this material as turf, and sometimes the organic material appears to be replaced by charring and/or iron to make a pseudomorph of the organic material or matting that had been there.

In addition to his Marie Curie project in India, David Friesem is now involved in geoarchaeological fieldwork at several Palaeolithic sites in Israel. These include: Nahal Ein Gev II, a Natufian culture, Epi-Palaeolithic site with evidence for the last Palaeolithic foragers just on the verge of the emergence of agriculture; Shovakh Cave, a Late Middle Palaeolithic cave site in Wadi Amud; and Sefunim Cave, a cave site in Mt Carmel with Middle to Upper Palaeolithic transition (8). For each, the geoarchaeological work focuses on the site-formation processes and the micro-archaeological record of human activity using micromorphology and FTIR spectroscopy.

Funding sources: AHRC; Alberto Benavides; EU/ERC; National Geographic; McDonald Institute; McBurney Laboratory; Newton Trust/Royal Society

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Dr Ivana Ozán (*CONICET, Buenos Aires*)
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Dr Heejin Lee (*Seoul, South Korea*)
Dr Xijie Zhuang (*Institute of Archaeology, University College London*)

Visiting Graduate Students

João Araújo Gomes (*Lisbon*)
Susanne Cereda (*Vienna*)
Juan Carlos Salamanca Mateos (*Erasmus: Madrid*)



D. FRIESEM

8. Sefunim Cave, Mt Carmel, Israel: David Friesem sampling the excavation profile in the cave. The upper brown sediments are associated with Epi-Palaeolithic activity. The lower bright sediments show post-depositional processes of calcification of the archaeological sediments associated with Upper and Middle Palaeolithic layers.

Glyn Daniel Laboratory for Archaeogenetics

MARTIN JONES

This year, the Laboratory has had two major foci of research. One arises from the ERC funded FOGLIP project, which reached successful completion during the year, and has used genetics (alongside archaeobotany and isotope studies) to understand the movement of East Asian crops (broomcorn and foxtail millets, and buckwheat) westward, and West Asian crops (primarily wheat and barley) eastward. The other arises from Andrew Clarke's ongoing study of what was, before the modern era, possibly the most global economic plant of all, the bottle gourd.

Harriet Hunt's archaeogenetic research into the Asian millets continues to add clarity to the history and biogeography of what remain the least explored aspect of crop globalization, the spread of what are now considered minor cereals, into the West Eurasian realm of the 'major cereals', wheat and barley. Working closely with Harriet, Natalia Przelomska has completed her PhD thesis on the genetic basis of flowering-time variation in Eurasian foxtail millet. Her research focus over the latter part of her project had been the search for signatures of selection on flowering-time genes. Natalia carried out a DNA capture protocol on 350 different foxtail millet accessions, and designed the capture array such that 150 candidate genes for flowering time were targeted by complementary RNA probes. Natalia also carried out genome-wide association analyses to search for quantitative trait loci associated with photoperiod-sensitive and photoperiod-insensitive varieties of foxtail millet.

In parallel to this work on East Asian crops, Diane Lister has studied living wheat and barley landraces, plus wild progenitors, from across Eurasia. Results from the analysis of microsatellite markers (repeat motifs in non-coding regions) in barley have shown phylogeographic patterns reminiscent of known pathways of migration from the Near East into Central, South and East Asia. Diane has also been studying the evidence of environmental adaptation and its role in the spread and establishment of agriculture in novel environments; this has involved the analysis of various genes in barley, such as those determining flowering time.



ANDREW CLARKE

Bottle gourds for sale in a Miraflores market, Lima, Peru. Bottle gourds have been cultivated in Peru for at least 8500 years.

Andrew Clarke's research focuses on using genetics to understand the history of human–crop relationships. Current research is focused on the bottle gourd (*Lagenaria siceraria*). The bottle gourd is grown for its hard fruit shells, which are widely used as containers. The bottle gourd was the only plant cultivated in both the Old and New Worlds in the pre-Columbian era and, in this sense, can be considered the world's first global crop. Despite its importance and distribution across many cultures, very little is known about the origins and dispersal of the bottle gourd. By undertaking genetic analysis of both archaeological and modern samples of bottle gourd, Andrew is reconstructing the evolutionary history of this crop.



Dr Diane Lister examining samples of diverse barley landraces from across Eurasia

Emily Wilkes and Finny Taylor also contributed to the Glyn Daniel Laboratory's bottle gourd research in 2015–16. Emily Wilkes completed a joint internship with the Pacific Presences team in the Museum of Archaeology and Anthropology, and was responsible for cataloguing more than 800 gourd objects in the museum's collection, with a focus on identifying objects that might be suitable for DNA analysis. Finny Taylor completed an undergraduate dissertation project on the correlation between gourd genetic diversity, seed phenotypes, and the human and physical geography of southern Africa.

Staff

Martin Jones (*Lab Director*)

Catherine Kneale (*Lab Manager*)

Post-doctoral researchers

Andrew Clarke

Harriet Hunt

Diane Lister

PhD student

Natalia Przelomska



Wild foxtail millet growing around the Neolithic site of Shimao, Shaanxi Province, China.

MARTIN JONES



The Dorothy Garrod Laboratory for Isotopic Analysis

TAMSIN O'CONNELL & CATHERINE KNEALE

2015–16 was a time of great change within the Dorothy Garrod Laboratory, with new members joining us, current members expanding their horizons and old members moving on to exciting new opportunities and positions.

We were joined by Argyro Nafplioti, a Marie Skłodowska-Curie European Fellow, who has previously worked at the University of Southampton, the American School of Classical Studies at Athens and the Cyprus Institute. Dr Nafplioti is an osteologist who uses strontium isotopic analyses to address mobility and colonization in the eastern Mediterranean during the Neolithic. Her arrival brings a welcome new dimension of strontium expertise to the lab. Akshyeta Suryanarayan began her PhD working with Cameron Petrie and Tamsin O'Connell on chemical and isotopic analyses of pottery from the Indus civilization, again broadening the lab's research focus to address ceramic vessel usage. Her work will be undertaken in collaboration with Ol Craig at the University of York, and Carl Heron, Director of Scientific Research at the British Museum. For Michaelmas Term, the lab also welcomed Tracey Rogers as a Visiting Scholar to the McDonald Institute. A long-standing collaborator of Tamsin O'Connell, Prof. Rogers is a marine mammal biologist from the University of New South Wales, working on ecological patterns in mammals assessed through a variety of proxies, including isotopic analyses. Through her, we can proudly claim to work on all seven continents of the world!

Emma Lightfoot continued to study the impact of climate on the spread of agriculture in Gansu province, China, through the ERC-funded *FOGLIP* project. She has maintained her links with Croatian Academy of Sciences and Arts, in Zagreb, through a new project on the impact of endemic violence on diet and health in Late Mediaeval and Historic Croatia in collaboration with Mario Šlaus. Emma is also a Co-Investigator on the AHRC-funded project entitled

'Literary Archaeology': Exploring the Lived Environment of the Slave, taking the novel tack of bringing together literary and archaeological narratives to explore the lives of enslaved people. Emma, together with Tamsin O'Connell, published the first global review of published human oxygen isotope data to test assumptions about the way such data are used to identify migrants in the archaeological record. As the ERC-Funded *FOGLIP* project drew to a close, Emma takes up the new challenge of working on Cameron Petrie's *TwoRains* project in 2016–17, examining the extent to which climate change caused the collapse of the Indus Civilization.

Susanne Hakenbeck continued her work on relationships between nomadic-pastoralist incomers and the settled agricultural populations in the fifth-century frontier zone of Hungary, aiming to tease out a more nuanced picture of interaction and conflict. The use of isotope analysis allows us to access directly the behaviours of individuals, both in terms of their mobility and their diet, and provides new insights into how people responded in their everyday lives to the great transformations surrounding the end of the Roman empire. She attended a conference in York in May on 'Interrogating the "Germanic": a category and its use in Late Antiquity and the early middle ages', where she spoke on the subject of hybridity in material culture and how we should take seriously some of the ambiguities that it presents us with.

Penny Jones is coming to the end of her PhD research on water availability and crop sustainability at Indus Civilization sites. Working as part of the *Land, Water and Settlement Project* (directed by C.A. Petrie and R.N. Singh), Penny has been using isotopic analyses of plant and faunal material to assess crop water-use efficiency, as well as small-scale climatic variations across the Indus region.

Maria Ana Correia is a PhD student on the *IN-AFRICA Project*, with Marta Mirazon Lahr as PI. Her research aims to refine our understanding of subsistence



Maria Ana Correia collecting hair and breath samples.

strategies in the Holocene populations in Lake Turkana, but to do so, she is assessing the diet of current pastoralists, hunter-gatherers and agriculturalists in eastern Africa, using isotopic methods. Her work is practically challenging, combining ethnographic interviews, and the collection of breath and hair samples in remote field locations, but like all Dorothy Garrod Laboratory members, she has embraced the challenge!

Tamsin O'Connell was absent from Cambridge for much of this year, on sabbatical leave in the Charente-Maritime. During this period, the isotopic analysis of prehistoric Neolithic populations from Malta was delegated to the rest of the FRAGSUS team (see p. 47). She spent the majority of her time writing, in delightful digital isolation, with a healthy haul of papers to show for it. She took time out to give a keynote lecture at a workshop on 'Palaeodiet meets Palaeopathology' in Santiago di Compostela, Spain, in October 2015, as well as speaking at several conferences, including 'Isotopes in Ecology' (Tokyo, April 2016), the Joint European Stable Isotope Users Meeting (Gent, Belgium, September 2016) and the International Symposium on Biomolecular Archaeology (Oxford, September 2016).

Many congratulations to those lab members who enjoyed successes this year, including Maurizio Marinato and Amy Prendergast. Maurizio Marinato, a visiting student in the lab over several years, was awarded his doctorate from the University of Padova, Italy. Maurizio will continue to collaborate with Susanne Hakenbeck and Tamsin O'Connell on his work on Late Antique and Lombard cemeteries in northern Italy. We are delighted at the two major accomplishments of a former lab member, Amy Prendergast, this year—a new baby and a Lectureship in the Department of Geography, University of Melbourne. Both will no doubt keep her very busy but contented in the years to come.

We also offer felicitations to Trish Biers and Ronika Power, who have left the laboratory for pastures new. Trish Biers takes up a new position as an osteologist at the Smithsonian Institution, and we wish her well and hope to continue fruitful collaborations. Ronika Power left us to take up a Lectureship in Bioarchaeology in the Department of Ancient History at Macquarie University—a position created especially for her. Ronika continues to be a key member of the FRAGSUS research team, and will maintain her links with Cambridge—we look forward to welcoming her back in the coming years.

Funding Sources: TO'C/RKP: ERC FRAGSUS; SH: McDonald Institute Research Grants; EL: ERC FOGLIP Grant Award no. 249642; PJ Rae and Edith Bennett Travelling Fund (main source), ERC FOGLIP Grant Award no. 249642, Royal Geographical Society Geographical Club Award (fieldwork grant); MAC: PhD Scholarship within the ERC-funded project 'IN-AFRICA: The role of East Africa in the evolution of human diversity'; BioAnth Fieldwork Fund.

Staff

Dr Tamsin O'Connell (*Director & Senior Lecturer in BioArchaeology*)
 Dr Susanne Hakenbeck (*Lecturer in Historical Archaeology*)
 Catherine Kneale (*Research Technician*)

Research Associates

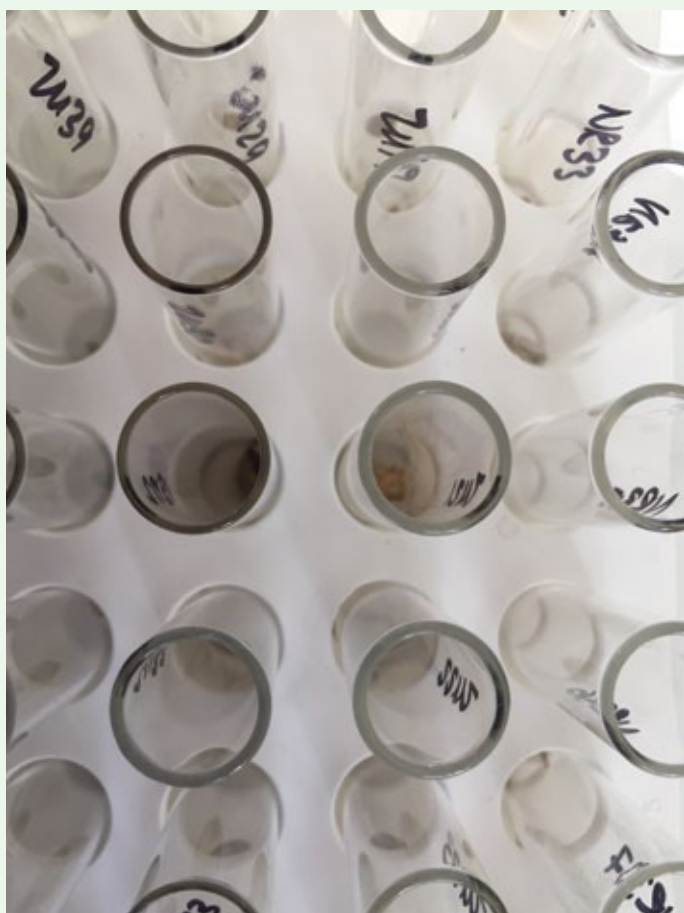
Dr Emma Lightfoot
 Dr Argyro Nafplioti
 Dr Ronika Power

PhD students

Penny Jones
 Maria Ana Correia
 Akshyeta Suryanarayan

Visiting Scholars

Dr Trisha Biers
 Maurizio Marinato (*Visiting Student, University of Padova*)
 Prof. Tracey Rogers (*Associate Professor, School of Biological, Earth and Environmental Sciences, University of New South Wales*)



Bone fragments ready for collagen extraction.

Heritage Research Group & Cultural Heritage Laboratory

MARIE LOUISE STIG SØRENSEN, DACIA VIEJO ROSE, GILLY CARR & LILIANA JANIK

The Heritage Research Laboratory functions as a hub for the growing community of students, post-docs, staff members and other researchers involved with heritage research. Apart from research projects and special events, a seminar series, a Bulletin and an annual conference are standing items of the Heritage cluster.

Talks for the *Cambridge Heritage Research Group* in 2015–16 ranged from the Corruption of Souls, texts, and Monuments, by Prof. Michael Herzfeld, to changes at Historic Royal Palaces, by Chief Executive Michael Day, Future directions for Historic England, by its Director of Research Steve Trow, and Augusta McMahon on the damage to cultural heritage in Iraq and Syria. Special events during the year included the visit of an official delegation from Myanmar and a lecture by Sanda Khin, former Deputy Minister of Culture and Chair of the Myanmar Cultural Heritage Trust.

In 2016 the annual *Cambridge Heritage Research Symposium* (or CHS) was dedicated to The Heritage of Displacement, looking specifically at forced migration in the Mediterranean through time. Accompanying the presentation of academic papers and lively discussion was a performance of Ladino songs and the exhibition of a piece by Syrian artist Issam Kourbaj entitled *Another Day Lost: 1,888 and counting* ...

The editor(s) of the *HRG Bulletin* changed in 2015 from Eve Avdoulos, who has done a sterling job, to Margaret Comer and Flaminia Bartolini. A useful new addition to the Bulletin has been a brief summary of each seminar, provided by Margaret Comer.

Members of the research group gave lectures in the UK and abroad, participated in workshops and were involved in several field projects. The theme of cultural destruction and reconstruction in connection with conflict continues to be a major focus, as does the investigation and legacy of places of conflict and occupation; but we are also working on developing new thematic foci, such as heritage and risk, and the British experience of Nazi persecution.

Marie-Louise Sørensen attended a closed UNESCO meeting on the Old City of Aleppo and meetings of the 'Walk of Truth' All Party Parliamentary Group for Cultural Heritage. Together with Dacia Viejo Rose, she organized a workshop on 'War and the destruction of Cultural Heritage' at the McDonald Institute as part of the Philomathia programme, and submitted a statement for the panels of the Second Annual Philomathia symposium. Dacia Viejo Rose was an invited speaker on the destruction of heritage in Switzerland, Colombia and Sweden, and began developing a research network on the heritage of displacement. Gilly Carr led excavations at forced labour camp Lager Wick in



Another Day Lost: 1,888 and counting ... by Issam Kourbaj.

Jersey, and joined excavation in Norway at SS prison camp Falstad. She filmed two BBC documentaries on British victims of Nazism in Germany and the Czech Republic and continued her activism in the Channel Islands. She won the 2016 Vice Chancellor's Award for Impact in the School of Humanities and Social Sciences. Paola Filippucci contributed to a community excavation led by the group No Man's Land (funded by the Heritage Lottery Fund) at Cocken Hall (county Durham), investigating the use of the Hall during the 1914–18 war. Liliana Janik's two research projects (*Rock Art of Northern Russia* and *Connecting the Landscape/ Materiality of Substance in Japan*) both highlight engagement with local communities. The Russian project, in particular, provides the basis for her engagement with visually impaired communities which will lead to an exhibition.

Staff

Marie Louise Stig Sørensen
Dacia Viejo Rose
Gilly Carr
Paola Filippucci
Liliana Janik

Postdoctoral Researcher

Paola di Giuseppantonio di Franco

Heritage PhD Students graduating 2015–16

Pablo Alonso Gonzalez
Meghan Bowe
Elizabeth Cohen
Hyun Kyung Lee
Guohua Yang
Dominic Walker

Current heritage PhD students

Flaminia Bartolini
Margaret Comer
Eva Meharry
Leanne Munroe (*née* Philpot)
Elizabeth Pratt
Calum Robertson
Susan Shay
Yingwen Tao
Minjae Zoh

Affiliated Researchers

Patricia Duff
Lucy Walker
Shadia Taha

Visiting Scholars

Prof. Chungkyu Lee (*Yeungnam University*)
Tanja Hoffmann (*Simon Fraser University, Burnaby, BC*)
Marta Carratala Guijarro (*Universidad de Granada*)

17th ANNUAL CAMBRIDGE HERITAGE RESEARCH SEMINAR

Saturday, 14 May 2016
McDonald Institute for Archaeological Research

The Heritage of Displacement
Forced Migration in the Mediterranean through History



Throughout history forced mass movements of people have created heritage, at the time and retrospectively. Sites left behind are reused or fall into ruin, objects are taken on journeys, cultural practices are introduced into new environments. In this symposium we will explore the heritage of these displacements with a particular focus on the Mediterranean region from pre-history till today.

The conference will include an exhibition of "Another Day Lost: 1,888 and counting..." by Syrian artist Issam Kourbaj, the performance of Ladino songs by Jessica Marlow, and a lunch inspired by Mediterranean culinary heritage.

For more information visit:
www.arch.cam.ac.uk/about-us/heritage/CHS17



Further information through the following media:

Website: www2.arch.cam.ac.uk/heritage/index.html

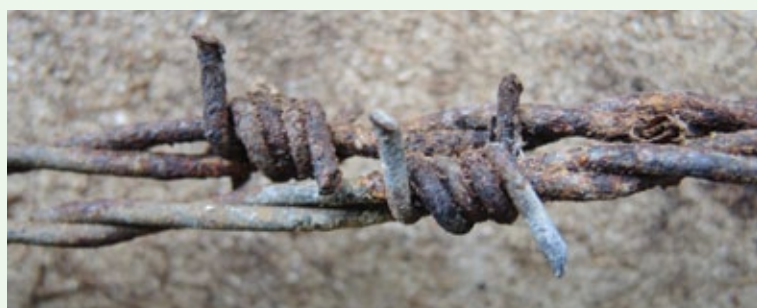
Annual symposium:

<http://www.arch.cam.ac.uk/about-us/heritage/CHS17>

Facebook: www.facebook.com/cambridgehrg

Twitter: <https://twitter.com/#!/cambridgehrg>

Linkedin: www.linkedin.com/groups/Cambridge-Heritage-Research-Group-4925222



Barbed wire from Gilly Carr's excavation at Lager Wick, Jersey, Channel Islands.

Egyptology at Cambridge

HRATCH PAPAZIAN

Egyptology at Cambridge continues its long-standing association with the McDonald Institute and integrates researchers involved in diverse and interdisciplinary projects drawing on source material from Egypt and the Sudan, as well as evidence from Libya and the eastern Mediterranean. Approaches span the various spectra of textual and archaeological research, including bioarchaeology and earth sciences. The academic officers in the Division of Archaeology, Dr Kate Spence for Egyptian Archaeology and Dr Hrach Papazian for Egyptian Language, maintain field projects at Sesebi, in the Sudan, and Abydos respectively. Others working in the region maintain an affiliation to the Institute contributing to a vibrant research community. These include ongoing projects such as Professor Barry Kemp's mission at Amarna (with Anna Stevens, an Affiliated Scholar at the McDonald, as Assistant Director), Janine Bourriau's work on Egyptian ceramics, and Dr Judith Bunbury's collaborative investigations of river movement, water management and climate change. Researchers and students from Cambridge remain active in various capacities at many sites in Egypt and the Sudan, such as the Buto, Memphite area (Giza, Mit Rahina and environs), Helwan, Thebes, Amara West and Suakin.

Egyptology also serves as the link between several post-doctoral researchers, whose interests are firmly grounded in Egyptology, and the McDonald Institute. Many in the past have been funded, or continue to be funded, by leading European agencies, while others are recipients of grants administered by the University of Cambridge. Thus, during the 2015–16 academic year, Dr Giulio Lucarini, Dr Rune Nyord and Dr Paul van Pelt, who holds a Junior Research Fellowship at Trinity Hall, were associated with the McDonald Institute. We benefited from the presence of bioarchaeologist Dr Ronika Power, although her research was Mediterranean-focused during this period. The multi- and inter-disciplinary perspectives of Egyptological research being conducted at Cambridge is also reflected in the dissertation topics of current doctoral candidates, some of whom are also members of other laboratories at the McDonald (e.g. the Charles McBurney and Material Culture Laboratories). The range of topics include temple doorways, Old Kingdom settlements, Early Dynastic burials, notions of ancient Egyptian law, administration and political change in the Eighteenth Dynasty, aspects of the childhood experience at Deir el Medina, artificial light, study of living conditions and use of space in Egyptian houses, and offering practices.

As with past years, the Egyptian World Seminar Series, held regularly at the McDonald Institute, featured speakers from Cambridge, as well as from universities and academic societies in the UK and beyond. The 2015–16 series was, for

the second year in a row, extended beyond the academic year to incorporate a summer programme of lectures. Presentations by Helen Strudwick and Julie Dawson, Nichole Sheldrick, Carl Graves, Miroslav Bárta, Nigel Strudwick, Iwona Zych and Anna Stevens highlighted current research in history and chronology, conservation, archival material and reports on excavations and museum exhibitions.

Funding for the Egyptian World Seminar Series is provided by The Thomas Mulvey Fund. The McDonald Institute for Archaeological Research and the Division of Archaeology are hereby also acknowledged for their support.

Egyptology Affiliates

Janine Bourriau (*McDonald Institute*)
 Judith Bunbury (*Earth Sciences*)
 Corinne Duhig (*Bioarchaeology*)
 Barry Kemp (*Professor Emeritus in Egyptian Archaeology*)
 Geoffrey Thorndike Martin (*Christ's College*)
 Ronika Power (*McDonald Institute*)
 John Ray (*Professor Emeritus in Ancient Egyptian Language*)
 Anna Stevens (*Amarna Project*)
 Gemma Tully (*McDonald Institute*)

PhD students

Kelly Accetta
 Pippa Browne
 Mat Dalton
 Renate Fellingner
 Pedro Goncalves
 Ben Hinson
 Barbora Janulíková
 Alex Loktionov
 Hilary Stewart
 Sarah Strange
 Meghan Strong
 Ana Tavares
 Kimberley Watt



Bea Hannay-Young and George Heath-Whyte reading the inscription on an Egyptian shabti at the Museum of Archaeology and Anthropology.

LAURIE BONNER

DM McDonald Grants and Awards

The Institute supports field projects and other research initiatives of the University of Cambridge's archaeologists through its annual grants from the DM McDonald Grants and Awards Fund. In 2015–16, grants totalling nearly £130,000 were awarded to 31 projects ranging widely in time and space, many of which are highlighted in this report.

Projects

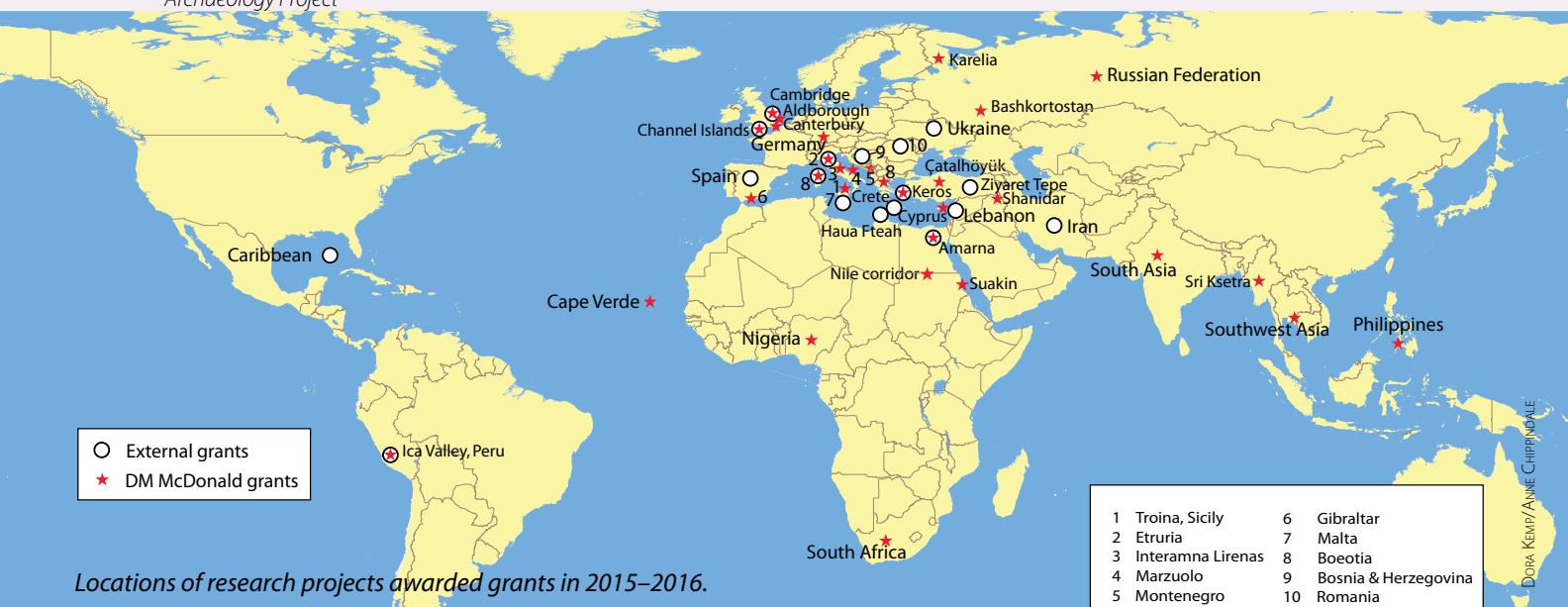
- **James Blinkhorn**
The origins of hafting in South Asia
- **Gillian Carr**
Lost in the Landscape: Nazi Camps on British Soil
- **Craig Cessford**
The Cambridge Palaeochannels and Islands Project
- **Emanuela Cristiani**
Prehistoric Foragers and Farmers at Vrbička Cave, western Montenegro
- **Chris Evans & Marie Louise Sørensen**
Cidada Velha, Cape Verde: town ruins and environs survey (2nd phase)
- **Margarita Gleba**
Sheep management and mobility in first-millennium BC Italy
- **Liliana Janik**
Rock Art of Northern Russia
- **Sacha Jones**
Attribute analysis of archived Upper Palaeolithic stone artefacts from Shanidar Cave, Iraqi Kurdistan
- **Jody Joy**
The Snettisham Treasure Project
- **Barry Kemp**
Preparation of illustration for publication: a study of decorated stone fragments and tools from the Great Aten Temple at Amarna
- **Sheila Kohring**
Constructing locality: the Bury Farm Archaeology Project

- **Hannah Malone**
Italian fascism and the ossuaries of the Great War
- **Luc Moreau**
Raw material analysis from Belgium and Romania
- **Emuobosa Orijemie**
New applied approaches to African farming systems: the long-term history of farming in Tiv, Nigeria
- **Emma Pomeroy**
Death on the rock: the bioarchaeology of a post-medieval hospital in Gibraltar
- **Miljana Radivojević**
The (r)evolution of early Eurasian metallurgy: exploring the how and why behind metal invention and innovation in Balkan and Steppe metallurgy
- **Colin Renfrew & Michael Boyd**
The Keros–Naxos seaways and the origins of cult at the Kavos sanctuary
- **John Robb**
Developing new formal methods for prehistoric art
- **Anthony Snodgrass**
A season of geophysical survey at the prehistoric and ancient site of Haliartos, Boeotia, Central Greece
- **Kate Spence**
Exploitation and interaction in a contested zone: Preliminary survey of the Nile corridor and hinterland between Sesebi and Soleb
- **Simon Stoddart**
The classical town of Troina

- **Astrid VanOyen**
Marzuolo Archaeological Project (MAP): crafting innovation and community in the Roman countryside
- **Lacey Wallace**
Ickham Survey (part of the Canterbury Hinterland Project)
- **Toby Wilkinson**
Digital intensive survey around Tavşan Adası, Milesian peninsula, Turkey
- **Hermine Xhaufleur**
The Denticulate Project

Conferences

- **Dunia Filipi**
Ancient Topography, landscape archaeology and human landscape: different perspectives on the study of the ancient urban space
- **David Friesem**
SHARING – The archaeology and anthropology of hunter-gatherers
- **Alice Leplongeon**
Current approaches and new directions in lithic analyses
- **Pamela Jane Smith**
The Personal Histories Project – ‘A history of colour in Cambridge’
- **Simon Stoddart**
Studying urbanism in first millennium BC (Iron Age) Germany
- **Rachel King & Chris Wingfield**
The pasts and presence of art in South Africa: technologies, ontologies, and agents



Research Grants

- **Prof. Graeme Barker**
The Cyrenaica Prehistory Project: Renewed Fieldwork at the Haua Fteah (Society for Libyan Studies)
- **Prof. Graeme Barker**
How resilient were Neanderthals and Modern Humans in SW Asia to climate change? (Leverhulme Trust)
- **Dr James Barrett**
Northern Journeys: Reimagining the Medieval Revolution and its aftermath (Leverhulme Trust)
- **Dr James Barrett**
Tracking Viking-assisted dispersal of biodiversity using ancient DNA (University of Oslo)
- **Dr David Beresford-Jones**
One River Project (Alberto Benavides Ganoza)
- **Dr Dorothea Bosch**
Behavioural Modernity in the Early Upper Palaeolithic (EU-BEADS) (EC H2020 MSC Fellowship)
- **Dr Andrew Clarke**
Archaeogenetics of the first global crop: 10,000 years of bottle gourd dispersal (Leverhulme Trust and Isaac Newton Trust)
- **Dr Emanuela Cristiani**
Plant foods in Palaeolithic and Mesolithic societies of SE Europe and Italy (European Research Council)
- **Dr Paola Di Giuseppantonio Di Franco**
Digital artefacts: how people perceive tangible cultural heritage through different media (EC FP7, Marie Curie Intra European Fellowship)
- **Prof. Charles French**
3D acquisition, processing and presentation of prehistoric European rock-art (PITOTI) (EU Collaborative Project)
- **Dr David Friesem**
TROPICMICROARCH: Tropical Micro-Archaeology: An interdisciplinary project aiming to study site formation processes in tropical environment related to hunter-gatherers' use of space (EC FP7 Marie Curie Intra European Fellowship)
- **Dr Margarita Gleba**
Production and consumption: textile economy and urbanisation in Mediterranean Europe 1000–500 BCE (European Research Council)
- **Dr Emmanuelle Honoré**
Painting the body: Prehistoric cognition of oneself and of the 'alter' in North African rock art (Royal Society Newton International Fellowship)
- **Prof. Martin Jones**
Food Globalisation in Prehistory (European Research Council)
- **Prof. Martin Jones**
CASE Studentship: Identification of Flowering Time in Genes in Foxtail Millet and its Potential Impact on Food (BBSRC and Unilever)
- **Dr Alice Leplongeon**
Technological variability during the Late Pleistocene in Eastern Africa: lithic assemblages as indirect witnesses of past human population dynamics (PleisTechnoVar) (EC H2020 MSC Fellowship)
- **Dr Emma Lightfoot**
Literary archaeology: exploring the lived environment of the slave (AHRC)
- **Dr Giulio Lucarini**
Human transitional pathways towards food production in North Africa (AGRINA) (EC FP7, Marie Curie Intra European Fellowship)
- **Dr John MacGinnis**
The Ziyaret Tepe Project (Ziyaret Tepe Archaeological Trust)
- **Dr Evi Margaritis**
The olive and the vine in prehistoric Europe (OVIPE) (EC FP7, Marie Curie Intra European Fellowship)
- **Dr Preston Miracle**
Curricular reform of heritage studies in Bosnia & Herzegovina (EC Tempus)
- **Dr Preston Miracle**
Smart integration of genetics with sciences of the past in Croatia: Minding and mending the gap (EC H2020 Spreading excellence and widening participation, Twinning Project)
- **Dr Henrietta Moore and Dr Matthew Davies**
African farming systems: an interdisciplinary pan-African perspective (British Academy International Partnership & Mobility Scheme)
- **Dr Luc Moreau**
Early Upper Palaeolithic mobility and technological decision-making under changing environmental constraints: case studies from Belgium and Romania (PALMOBI) (EC H2020 MSC Fellowship)
- **Dr Argyro Nafplioti**
Early populations in Cretan history: investigating residential mobility in the Eastern Mediterranean using isotope geochemistry (EPOCHGEOCHEM) (EC H2020 MSC Fellowship)
- **Dr Philip Nigst**
Neanderthal and Modern Human adaptations in Eastern Europe (NEMO-ADAP) (EC FP7, MC European Reintegration)
- **Dr Philip Nigst**
Neanderthal and Modern Human Adaptations in Eastern Europe (Isaac Newton Trust)
- **Dr Tamsin O'Connell**
Mechanisms of macronutrient routing: isotopic studies of C and N metabolism (Royal Society)
- **Dr Cameron Petrie**
The rise and transformation of the earliest village societies in highland Iran (Isaac Newton Trust)
- **Dr Cameron Petrie**
Winter rain, summer rain: adaptation, climate change, resilience and the Indus civilisation (European Research Council)
- **Dr Emma Pomeroy**
Archaeological insight into contemporary chronic disease risk among South Asians (Isaac Newton Trust and Leverhulme Trust)
- **Prof. Colin Renfrew**
Icon and centre in the Cycladic Early Bronze Age (Leverhulme Trust)
- **Dr Alice Samson**
The materiality of early creolization in the Caribbean, AD 1000–1550 (British Academy Early Career Fellowship)
- **Dr Jay Stock**
ADaPt: Adaptation, dispersals and phenotype: understanding the roles of climate, natural selection and plasticity in shaping global hunter-gatherer adaptability (European Research Council)
- **Dr Simon Stoddart**
Fragility and sustainability in restricted island environments (FRAGSUS) (European Research Council)

The Economic and Social Origins of Maya Civilization

NORMAN HAMMOND (*McDonald Institute*)

The post-excavation study of materials from the long-term (1975–2002) investigations at the early tropical forest Maya village site of Cuello, Belize, continues (the Maya Origins Project was given one of eleven Research Awards at the Second Shanghai Archaeology Forum in December 2015). A new programme of stable-isotope (C, N, S, Sr) analyses of human skeletal remains was instituted (with Kristin Hoffmeister, Texas A&M University) to increase understanding of the maize- and root-based diet, with its animal protein component coming from domestic dog and hunted forest species including deer and peccary. Strontium isotopes will be used to determine whether any of the 166 Preclassic burials are of non-locals: this applies especially to the 30 individuals in Mass Burial I (c. 400 BC) who were males from young to middle adult age, and some or all of whom might have been sacrificed captives from elsewhere.



Carved bone, Cuello, 400 BC.

SHEENA HOWARTH



Sweathouse, Cuello, 800 BC (drawing by M. Rothman, 2001).

CUELLO PROJECT ARCHIVE

Technological Variability at the End of the Pleistocene in Eastern Africa

ALICE LEPLONGEON (*McDonald Institute*)

PleisTechnoVar aims better to understand the increase in technological variability observed in Africa during the Late Pleistocene and the first part of the Holocene.

This year, the research focused on the lithic material from two cave sites in southeastern Ethiopia (Porc-Epic and Goda Buticha, assemblages stored at the National Museum of Ethiopia) as well as the material from Enkapune Ya Muto (Central Rift Valley, Kenya, assemblages stored at the National Museums of Kenya). The southeastern Ethiopian record shows Middle Stone Age (MSA) characteristics at an unusually late date for the region (i.e. 6000–8000 years ago). On the contrary, the archaeological record from Enkapune Ya Muto (Kenya) displays an early (>50,000 years ago) abrupt change to the Late Stone Age (LSA). This adds to the evidence for a non-linear and multiple shift from the MSA to the LSA in Africa.

In relation to this research project, an international workshop on methods in lithic analysis, funded by a grant from the D.M. McDonald Grants and Awards Fund, was organized at the McDonald Institute with the aim of bringing together lithic analysts from different countries to discuss which analytical tools allow us to best understand variability in lithic assemblages.

PleisTechnoVar has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 655459. Website: <http://www.pleistechnovar.jimdo.com>



Enkapune Ya Muto rock-shelter (Central Rift Valley, west of Lake Naivasha).

ALICE LEPLONGEON



Suakin 2015–16

LAURENCE SMITH (*McDonald Institute*), MICHAEL MALLINSON (*Mallinson Architects*), JACKIE PHILLIPS (*SOAS and McDonald Institute*), S. TAHA (*McDonald Institute*) & KATE ASHLEY (*Loughborough University*)

The Suakin Project, under the Sudanese National Corporation for Antiquities and Museums (NCAM) and the Red Sea State, continued with post-excavation study. Some 250 further small finds including ceramics, glass, metal and wooden objects, and plans and sections, were inked. These, together with slides from earlier seasons, were scanned for publication. Identifications of wood samples from Beit Khorshid Effendi and the Governor's Residence include acacia, pine or cedar, date or dom palm, together with probable oak. Most significantly, they provide the first confirmation of teak (*Tectona grandis*), apparently supporting the hypothesis that timber for bay windows (*rawashin*) was brought from south or southeastern Asia. Soil samples from the Beit el-Mufti exhibit marine mollusc shells, crab and fish bone fragments and charcoal from more than one taxon. Radiocarbon dating confirms occupation in this house between the late seventeenth and nineteenth centuries. Study of 150 fauna samples indicates a predominance of sheep and goat, followed by cattle, in locations excavated to date.

A series of workshops have been held in Sharjah and Suakin with ICCROM-ATHAR to develop a project to restore Suakin as part of the Islamic Capital of Culture Programme which Sudan is hosting in 2017. This includes completing the Suakin

Museum, carrying out rescue conservation and new projects for restoration, clearance and archaeology. Applications have been made to the British Council Heritage Protection Fund for heritage threatened by conflict to establish a Conservation School at Suakin to provide training for Sudanese in heritage protection, museology, site presentation and conservation. The proposal aims to establish a heritage protection policy for Sudan (the first in the Middle East) and carry out heritage recording of the inaccessible areas of Sudan threatened by conflict.

The project is funded and supported by McDonald Institute for Archaeological Research, Fondation Max van Berchem, British Institute in Eastern Africa, Cambridge University Foreign Travel Fund, and Red Sea State and Ministry of Tourism, Antiquities and Wildlife, Sudan. Thanks to: M. Buckley, A. Clapham, Y. Tahir, S. Hooper, J. McDonald, W. Schenck, R. Veal.



Panel from one of the rawashin from the Governor's Residence, during conservation.

LAURENCE SMITH

Buto, Egyptian Nile Delta

JANINE BOURRIAU (*McDonald Institute*)

I have been collaborating for some years with my husband, Peter French, in the excavation of the city of Buto in the Egyptian Nile Delta. The archaeological team from the German Archaeological Institute, Cairo, is led by Dr Ulrich Hartung and is chiefly interested in exposing the Early Dynastic (pre-3000 BC) remains on the site. Our own role is to study the Late Dynastic to Ptolemaic (c. 750 BC–AD 200) Roman city which covers the earlier levels. This involves working principally with the ceramic material, with the assistance of one specialist ceramicist/draughtsman.

During October 2015 to September 2016, two periods of one month each were spent working at Buto: October 2015 and April 2016.

Financial support until now has come exclusively from the German Institute in Cairo.

Anubieion, Saqqara, Egypt

JANINE BOURRIAU (*McDonald Institute*)

This project concerns the completion of publication of the fieldwork at the Anubieion at Saqqara in Egypt. Three ceramic volumes remain to be finished by myself and Peter French. These deal with the pottery of the Late Dynastic period; the pottery of the Ptolemaic and Early Roman period; and the pottery of the Coptic period, the village which overlies the Anubieion temple. We have previously completed and published a volume covering the earlier pottery, of the Old to New Kingdom.

Landscape Archaeology

JUDITH BUNBURY (*Department of Earth Sciences*)

To what extent did landscape change and geology influence the sites of tombs in the Theban Mountain, in the Valley of the Kings and further afield? Our fieldwork, directed by Prof. Geoffrey Martin and Piers Litherland, in the desert near Luxor (Egypt), aims to answer these questions. Work above ground and underground has focused on the geological units selected by the tomb builders and noted the response of the ancient tomb architects to joints, faults, flint nodules and other obstacles in the tombs. Tomb builders responded to local conditions re-using natural flint nodules as hammers and adjusting the tomb plan to avoid hard bands and exploit the natural cracks (joints) in the rock. Many archaeologists anticipate using these observations as a predictive tool for locating as yet undiscovered tombs. However, beyond the Valley of the Kings, a more chaotic pattern of excavation emerges and the tomb sites crop up in a variety of unlikely and inaccessible places. Examination of the geological units at remote sites suggests that proximity to a supply route was important and that, when the climate was milder and wetter, tomb sites migrated further out into the desert.

Funded by The New Kingdom Research Foundation.



GRAHAM SMITH

Recording geological features in KV55 in the Valley of the Kings, Egypt.



JUDITH BUNBURY

Graham Smith abseils through a cleft in the Theban Mountain.

Animal Hand Stencils at Wadi Sûra II

EMMANUELLE HONORÉ (*McDonald Institute*)

Since the discovery of the rock-art site of Wadi Sûra II shelter—improperly called the ‘Cave of Beasts’—in 2002 on the flanks of the Gilf el-Kebir massif in southwestern Egypt, it was widely assumed that the tiny stencil hands from one of the oldest phases of paintings were made with children’s hands used as stencils. In this project, we challenge their identification by means of a morphometrical comparative study. Ratios and measurement collected on a series of newborns, non-human primates and reptiles led to their identification as desert monitor lizard forefeet.

Animal hand stencils are evidenced here for the first time in Saharan rock art. The project examines the conditions in which stencilling was made. It prompts us to rethink deeply the variety of relationships that the last hunter-gatherers of the Eastern Sahara have had with animals, far beyond the paradigmatic ‘hunter–prey’ relation still dominating the literature.

This project is a British Academy-funded Newton International Fellowship.



EMMANUELLE HONORÉ

A frieze of Varanus forefeet stencilled on the wall of Wadi Sûra II, Gilf el-Kebir, Egypt.



The Ancient City of Amarna, Egypt

BARRY KEMP (*McDonald Institute*)

It has long been one of the aims of the Amarna Project to improve the appearance of those parts of the ancient city which are open to visitors and to increase understanding of the place and its broader significance. An important milestone was passed when, on 20 March 2016, the Visitor Centre at Amarna was opened by the Minister of Antiquities. Funded by the Ministry of Antiquities and designed by Mallinson Architects of London, the Visitor Centre contains educational displays based on material supplied by the Amarna Project and large spaces for gatherings. The Project continues to work in collaboration with the Ministry of Antiquities to expand the displays and to develop outreach programmes.

Web sites are:

www.amarnaproject.com and www.amarnatrust.com

Research through excavation together with the cleaning and repair of major structures remain at the heart of the Amarna Project and are funded from a range of sources including the Amarna Trust, the Amarna Research Foundation (Denver, Colorado) and the Egyptian Department of the Metropolitan Museum of Art, New York; the North Tombs Cemetery excavation is partly funded by a National Endowment for the Humanities grant held by the University of Southern Illinois, USA.



MICHAEL MALLINSON

Local schoolchildren from the village of El-Till Beni Amran gather to greet the Minister of Antiquities on 20 March 2016, for the official opening of the Amarna Visitor Centre.

The Sinki Pyramid Project

HRATCH PAPAIZIAN (*Division of Archaeology*)

The Sinki Pyramid Project undertook a conservation and stability assessment of the pyramid in South Abydos in late March and early April 2016, which was conducted by conservation architect Dr Nicholas Warner. Future conservation work, intended to ensure the long-term physical stability of the monument, will be carried out on the basis of the recommendations included in this evaluation. A site preservation proposal was also prepared at the same time, aimed at managing the continued pressure of expanding agricultural fields onto antiquities zones in Abydos, a major concern in its own right prevalent in many other parts of Egypt as well. The steps undertaken by Cambridge in late 2014 to safeguard

the pyramid zone from the illegal encroachment of fields (see the 2013–2014 Annual Report) appear to have borne fruit. Following the recent suspension by the Ministry of Antiquities of the statute banning new excavations in Upper Egypt, a closer archaeological examination of the site is currently being planned.

The conservation assessment was supported by the Impact Facilitation Fund of the McDonald Institute for Archaeological Research.

Geo-Ethnoarchaeology of Hunter-Gatherers in Tropical Forests

DAVID FRIESEM (*McDonald Institute*)

TropicMicroArch project studies the processes involved in the formation of archaeological evidence associated with hunter-gatherers in tropical forests. This multidisciplinary project combines long-term ethnographic fieldwork (with Noa Lavi, a social anthropologist, University of Haifa) among contemporary hunter-gatherers in South India, ethnoarchaeological excavations and sampling of several sites (two open-air sites and a rock-shelter) abandoned by the same people and microscopic analysis in the Charles McBurney Laboratory for Geoarchaeology and the George Pitt-Rivers Laboratory for Bioarchaeology. This year focused on synthesis of the results, which produced a model to link immediacy, mobility and sharing with hunter-gatherer use of space and with spatial distribution of microscopic materials. In addition, another model was built for the post-depositional processes which affect the formation and preservation of archaeological materials in tropical forests.

During September 2016, the project organized a conference titled: 'SHARING: The Archaeology & Anthropology of Hunter-Gatherers'. The conference brought archaeologists and anthropologists from all over the world to discuss how we can advance the study of hunter-gatherers in the past and present and how we can promote better integration between the disciplines.

TropicMicroArch is funded by the European Commission under Marie Curie Intra-European Fellowship (FP7) held by David Friesem.



Left: A hearth as observed during ethnographic work among a hunter-gatherer community in South India; Right: The remains of a hearth exposed in the excavation of an abandoned rock-shelter. The excavation profile in the field (top) and the charcoal remains (in black) as observed under the microscope (bottom).

Cooling Japan: Exploring the Neuroaesthetic of a Prehistoric and a Contemporary Art

LILIANA JANIK (*Division of Archaeology*)

This installation for the 8th World Archaeological Congress in Kyoto grew from collaboration between the archaeologist Dr Liliana Janik and artist Ms Katarzyna Szczęna. It was created as a multivocal visual dialogue between the imagery captured in prehistoric rock art, archaeological interpretation, Edo kimono imagery and the Japanese tradition of 'cooling down' used during the hot summer days, neuroaesthetic approaches and the creative abilities of a contemporary artist in weaving these strands together.

The prehistoric imagery used here comes from the White Sea rock-art complex in Russia and is over 5000 years old. The significance of this rock art and its imagery lies in the realistic depictions of humans absent from other parts of the world, as well as the way the rock art has been used to mimic the real landscape, as if conveying a real act of skiing down a slope (experiential art).

The Japanese tradition of 'cooling down' or 'keeping cool' during the hot and humid summer months resulted in exploiting human senses in a variety of ways; e.g. during news bulletins, behind the journalists, we can see water running down the wall to convey the feeling of coolness and freshness during the hot and sticky days and nights. Similarly, in this installation is used the 'cooling' imagery that, when seen, has triggered in the viewers' brains the memory of snow, skiing and freshness, so welcomed in hot and humid Kyoto. To make this place and event specific, the installation was made in the shape of a kimono, a form of clothing unique to Japan, printed with winter metaphors from winter rock-art scenes and with snowflakes in a shape used on Edo period kimonos.



Spread of Ancient Parasites Along the Silk Road

PIERS MITCHELL (*Division of Biological Anthropology*)

An ancient latrine in northwestern China has revealed the first archaeological evidence that travellers along the Silk Road were responsible for the spread of infectious diseases 2000 years ago. Hui-Yuan Yeh and Piers Mitchell used microscopy to study preserved faeces on ancient 'personal hygiene sticks' (used for wiping away faeces from the anus) from a latrine at a large Silk Road relay station at Dunhuang dating from 111 BC–AD 109 (Han Dynasty). Eggs from four species of parasitic worm (helminths) were present: roundworm, whipworm, *Taenia* sp. tapeworm and Chinese liver fluke.

Chinese liver fluke is a flatworm that causes abdominal pain, diarrhoea, jaundice and liver cancer. It requires well-watered, marshy areas to complete its life cycle. Xuanquanzhi relay station was located in an arid region of China close to the Taklamakan Desert and the Gobi Desert. In the twentieth century the closest endemic area to the latrine is around 1500 km away. This suggests that the traveller infected with this liver fluke must have journeyed an enormous distance from eastern or southern China and provides the first reliable evidence for long-distance travel with an infectious disease along the Silk Road in ancient times.



HUI-YUAN YEH

2000-year-old personal hygiene sticks from the latrine.

TwoRains in Northwest India

C.A. PETRIE (*Division of Archaeology*), R.N. SINGH (*McDonald Institute*) & H. ORENGO (*McDonald Institute*)

Under the aegis of the recently commenced *TwoRains* project, which is being funded by the ERC, a survey to identify palaeoclimate records was carried out, followed by excavations at the Indus site of Khanak in February 2016. This was complemented by detailed remote sensing on the plains of northwest India between March and October 2016. The palaeoclimate survey identified a range of possible locations for sampling in 2017. The site of Khanak appears to have been occupied during the Early and Mature Harappan periods, and has important evidence for metal working, which is very significant as it is in relatively close proximity to sources of copper and also possibly tin. The excavations revealed very high-quality stratigraphy, which was ideal for detailed sampling for geoarchaeology, archaeobotany, archaeozoology and ceramic analyses. Work in Cambridge on remote sensing involved the collation of a wide range of data sources ranging from historical maps from the nineteenth century up to recently acquired radar and multi-spectral imagery. The processing and analysis of this imagery is enabling the first systematic assessment of the surface and sub-surface landscapes of northwest India.



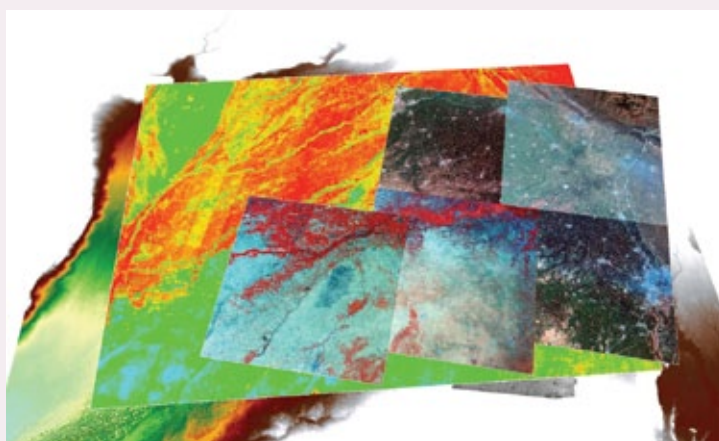
C.A. PETRIE

Preserved mud-brick architecture and associated floor surfaces at Khanak.



C.A. PETRIE

Visitors to the excavations at Khanak.



HECTOR A. ORENGO

Overlaid SRTM, ASTER and Landsat imagery highlighting landscape and hydrological features on the plains of northwest India.

Late Bronze Age Metallurgy in Bashkortostan, Russia

MILJANA RADIVOJEVIĆ (*McDonald Institute*)

Metallurgical activities in the Eurasian Steppe Bronze Age reach their peak in the Late Bronze Age (LBA), roughly between the nineteenth and fifteenth centuries BC. This period is marked by the intensified exploitation of copper ores and production of copper and copper-alloy implements that were circulated between Xinjiang in China and the Moldovan Steppe by the bearers of the co-called Srubnaya and Andronovo cultural complexes. The productive economy at the time has been estimated at the places of copper exploitation, as in the site of Kargaly in southern Urals, which spread across nearly 500 sq. km, included c. 35,000 various features (open casts and shafts). It is thought to have yielded 100,000 million tonnes of copper during the 300 years of occupation by the bearers of the Srubnaya culture. Little is known, however, of the metal-producing economy in the hinterlands of this mine, which would shed more light on the organization of production in this part of the Eurasian Steppe at the time.

In the past year, I developed a project on metallurgy and landscape in the LBA sites in Bashkortostan (Russian Federation) with colleagues from the Ufa's M. Akmullah Bashkir State Pedagogical University: N.B. Sherbakov, I.A. Shuteleva and T.A. Leonova. One stream of research is investigating LBA metal production technology at the site of Muradimovskoe Poselenie, which has thus far yielded evidence for copper extraction and the presence of tin-bronze artefacts. The other stream explores the nature of copper resources in Bashkortostan, and beyond, in search of ores that were used to make metal at the same settlement. After provenance analyses of copper metal from Muradimovskoe Poselenie did not show correspondence with the copper ores and prehistoric slags from the mine of Kargaly, we embarked on inspecting and collecting copper ore samples for further provenance analyses from other nearby deposits in the south Trans-Urals region, like Bakar-Uzjak. We expect to build a sufficiently large database of provenance data to allow for reconstruction of copper acquisition routes in the second millennium BC in the southern Urals, as well as addressing production efficiency from the perspective of settlement metal production.

Research funded by McDonald Institute for Archaeological Research.



Copper carbonates (green malachite and blue azurite) at the mine of Bakar-Uzjak (Trans-Urals) before sampling.

Sri Ksetra 2015–16: Early Pyu Settlement Archaeology

JANICE STARGARDT (*McDonald Institute*), GABRIEL AMABLE (*Department of Geography*), SEAN TAYLOR (*McDonald Institute*), DIRECTOR AND STAFF OF THE FIELD SCHOOL OF ARCHAEOLOGY, MYANMAR

Phase 2 of excavations at the Yahanda mound, just outside the south gate, walls and moats of Sri Ksetra, Myanmar, continued from December 2015 to the end of February 2016. A total of 17 pits were excavated down to sterile soil on the Yahanda mound and Yahanda Gu areas (depths of c. 3.5–4.00 m) <www.arch.cam.ac.uk/research/projects/sri_ksetra>. Stargardt again gave Master Classes in excavation and recording techniques to staff and graduate students of the Field School of Archaeology, Pyay, Myanmar.

Excavations revealed for the first time stratigraphic evidence of phases of cultural change among the Pyu in the Yahanda area of Sri Ksetra: firstly, a long sequence of cremated human burials in wooden and terracotta urns, initially in the base context of pale sand and continuing up through two further geological layers without grave offerings. Immediately above were traces of the wooden floors of four houses, whose wooden post-holes descended into the contexts of the burial terraces, with as many as 12 urn burials under one house. Immediately above the floors, among domestic debris in hardened work surfaces, were the earliest indications of the adoption of Buddhism on a popular level in the form of finely made pottery, decorated with Indic techniques and stamped with Buddhist motifs. Both the pre-Buddhist burials and the evidence of early Buddhism in a domestic context are of regional significance.

Financial support from the ERC Project 609823 ASIA, Sidney Sussex College and the Field School of Archaeology is gratefully acknowledged.

Sri Ksetra, Yahanda Mound habitation site, TP8, east section: a cultural and chronological sequence from bottom to top of 12 cremated human burials starting before the third century BC; the trace of a wooden post-hole and floor; and successive contexts of dense ceramic deposits from the fourth to late seventh centuries AD, including simple early Buddhist artefacts in the fourth-century horizon.



The Denticulate Project

HERMINE XHAUFLAIR (*McDonald Institute*)

The denticulate project, situated between lithic and plant technology, aims at determining if the particular shape of denticulates from Southeast Asia is intentional, as considered so far, or if it is in fact fortuitous. Denticulates are one of the only stone tool types found in Island Southeast Asia and are characterized by a series of notches on one edge. They are thought to be a unique testimony of the willingness of prehistoric tool makers to control the shape and properties of their lithic implements in this region. Nevertheless, it was observed, doing experiments, that splitting rigid plants produces large micro-scars corresponding to the notches observed on denticulates. These stone tools might therefore be actually the involuntary result of this activity. To understand the reason of the particular shape of denticulates, Hermine Xhaufclair observes artefacts from different Philippine sites under the microscope. Doing so, she documents use-traces and residues that can reveal precisely the function of stone tools.

This research project is conducted in collaboration with the National Museum of the Philippines, the University of the Philippines, the PrehSEA project and the Palawan Island Palaeohistory Research Project.

The project is funded by a Fyssen Foundation postdoctoral grant. The fieldwork was supported by the McDonald Institute for Archaeological Research, the PrehSEA project and the French Embassy in Manila.



Display of Pala'wan organic objects, 'The Palawan: A long standing humanity', at a 3-day event at the Alliance Française, Manila, Philippines, organized by the French Embassy in Manila.

Excavations at Shanidar Cave, Iraqi Kurdistan

GRAEME BARKER (*McDonald Institute*)

Shanidar Cave is an iconic site in Palaeolithic archaeology because of the series of Neanderthal burials found there in the 1950s by Ralph Solecki in a 14 m deep trench. There has always been debate about his conclusion that some were killed by rockfalls and others buried with formal burial rites including, famously, one with flowers. The Cambridge team began new work at the site in 2015, and in 2016 we undertook two seasons of fieldwork, in March/April and September. By the end of the last campaign we had exposed the top 7 m of the part of Professor Solecki's trench where he found the main group of Neanderthal skeletal remains. We have found fragmentary bones in two locations that can be correlated with Professor Solecki's photographs and descriptions of his main Neanderthal finds. We are now employing a battery of techniques to date the burials, establish the climate and local environment in which these Neanderthals lived, and, we hope, work out how they died and were buried.

The project is funded by the Leverhulme Trust, with additional support from the McDonald Institute for Archaeological Research.



(Above left) The 1950s excavations at Shanidar cave, showing the position of the Shanidar V Neanderthal burial (the white arrow), the Shanidar I burial (the left-hand ranging pole) and the lower burials (by the seated figure). (Above right) The new excavations: the bases of the two ranging poles mark the re-located positions of the upper burials, and a trench to the left of the image (not shown) re-located the lower burials in September 2016.

(Left) Hermine Xhaufclair and Philippine students are selecting denticulates among the stone tools discovered at Pilanduk Cave, Palawan.

From Shell Beads to Human Behaviour

MARJOLEIN D. BOSCH (*McDonald Institute*)

In October 2015, I started my Marie Skłodowska-Curie fellowship: 'EU-BEADS'. The project aims to investigate symbolically mediated behaviour of Early Upper Palaeolithic modern humans through the study of personal ornaments. The goal is a better understanding of variation and standardization in shell bead production and use, as well as establishing new criteria for identification of anthropic modifications of marine shell beads. The large shell bead collection of Ksâr' Akil (Lebanon), dated roughly between 60,000 and 40,000 years ago, serves as a case study. I have started several sub-projects, for example the zooarchaeological study of the perforated shells from Ksâr' Akil, which I have on loan from Naturalis Biodiversity Centre in Leiden, Netherlands. Further, I have a 3D scanning project of modern shells to map local vitiation in structural integrity to distinguish natural *versus* anthropic perforation locations.

Website: www.eubeads.wordpress.com

EU-Beads has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 656325.



EU-BEADS

*μCT-scan of a *Columbella rustica* shell, kindly produced by Laura Buck, Cambridge University.*

Abu Salabikh and Kilise Tepe

NICHOLAS POSTGATE (*McDonald Institute*)

We all know digs can have a long half-life: the excavations at Kilise Tepe in Cilicia came to an end in 2012, and the last field season at Abu Salabikh in southern Iraq was in 1989. I am happy to report that the core of the final report on Kilise Tepe 2007–2012 is now in the hands (or should that be the files) of D-Space in the University Library, in their Apollo repository. We will later add text on the archaeobotany and zooarchaeology, on the micromorphology and on the ceramics, but the main excavation report and artefacts catalogue (by Naoise Mac Sweeney) should be publicly accessible very soon, with accompanying photos and plans integrated via hypertext.

As for Abu Salabikh, conditions in south Iraq now make it possible to visit the site, and when I was there on 30 September I was able to establish that some of the ceramics and some of the animal bones have survived the dilapidation of the dig house over a quarter of a century, and this should make it possible to retrieve missing data and finalize Vol. 5 in the *Abu Salabikh Excavations* series.

Textual Archaeology of the Ancient Near East: Are We Doing It Wrong?

YAĞMUR HEFFRON (*McDonald Institute & University College London*)

I was delighted to return to Cambridge in December to hold my Anniversary Fellowship conference, *Textual Archaeology of the Ancient Near East: Are We Doing It Wrong?* Following a brilliant tongue-in-cheek keynote address by Professor Richard Zettler of The University of Pennsylvania and the Penn Museum, the conference was in full force for two and a half days before concluding with a lively plenary session. Attended by over 70 participants, the conference featured nine individual sessions on a wide range of themes all devoted to exploring different methods of integrating textual information with archaeological evidence. I am pleased to report that the conference format of juxtaposing two papers with a response for each session worked extremely well, generating waves of inspiring discussion—which proved unstoppable over coffee, lunch, or dinner. The line-up of speakers and respondents included a superb mix of philologists, historians, material culture specialists, bioarchaeologists, art historians, landscape readers, stratigraphers and decipherers. Cambridge's own archaeological community was well represented. Local talent included Nicholas Postgate on Mesopotamian apricots, Cameron Petrie on the fickle textuality of Iran, and Kate Spence on why Egypt is complicated; as well as a smashing team of session chairs: Graeme Barker, Susanne Hakenbeck, Augusta McMahon, Tamsin O'Connell, Hratch Papazian, Simon Stoddart and Martin Worthington.

Once again, I would like to thank everyone who participated to make this such an intellectually vibrant event. Keep your eyes peeled for the proceedings to appear in print!

The conference, which took place 10–13 December 2015, was principally funded by McDonald Institute, and also received financial support from the British Institute for the Study of Iraq (BISI), and the Cary Robertson Fund, Trinity College.



Friday 11 December 2015.

Erbil Citadel Revitalisation

JOHN MACGINNINS (*McDonald Institute & British Museum*)

My major focus this year has been in my role as Archaeological Advisor to the High Commission for Erbil Citadel Revitalisation (HCECR). Erbil, the capital of the Kurdish Region of Iraq, is one of the oldest continually inhabited cities in the world. Its citadel mound is of exceptional importance, but hitherto has not been the target of major investigations. The first round of excavations, now complete, concentrated on the system of fortification walls. These were last known to have been standing in the mid eighteenth century, when the Ottoman Sultan Mahmoud I issued a *firman* ordering their repair; they subsequently disappeared under a ring of imposing mansions constructed around the perimeter of the citadel. In the event, the work revealed a sequence of walls going back, we believe, to the Neo-Assyrian period and including evidence for a destruction tentatively attributed to the campaign of the emperor Trajan in the region in 115 AD. Looking ahead, I will for the next four years be based at the British Museum, involved in delivering a training programme for Iraqi archaeologists drawn from across the country.



View of the fortification walls from the northwest.

Revisiting the Çatalhöyük Metallurgy

MILJANA RADIVOJEVIĆ (*McDonald Institute*)

The site of Çatalhöyük represents a milestone in our understanding of lives of past societies in Anatolia from as early as c. 7400 BC. The outstanding architectural and material legacy of this settlement has been attracting scholarly attention ever since its discovery, which is why today it is one of the best-studied prehistoric archaeological sites globally, bringing together an exceptional number of specialists involved in building hypotheses on the evolution of prehistoric communities in this part of the world. Some of the exceptional material culture includes the earliest known examples of their kind. For half a century, copper minerals and archaeometallurgical materials from this settlement have had such standing amongst scholars, not least due to the analytical work conducted in the 1960s, which identified pyrotechnological features in materials dated around the mid seventh millennium BC. However, these materials have never been fully assessed within their archaeological context, and most importantly, within the context of the use of copper-based minerals at the time.

An analytical reassessment of copper and lead-based minerals and beads, copper metal beads and high-temperature materials from the site that were excavated in the 1960s by J. Mellaart and first analysed by Neuninger, Pittioni and Siegl in 1964 has been conducted in collaboration with Prof. Thilo Rehren (UCL & the HBKU College of Humanities and Social Sciences) and Shahina Farid (UCL). Microstructural and compositional analyses emphasized a clear distinction between the mineral-based samples (galena and copper oxidic/sulphidic ores) and pure copper metal beads. Furthermore, we identified and reinterpreted the original pyrotechnological features of a sample identified earlier as slag. The features in question, despite justifiably characterized as a metallurgical slag, represent only a peripheral part of an otherwise insufficiently heated copper mineral, prompting us to question the intention behind the nature of its formation. The synthesis of our results provides a new outlook on the finds investigated more than half a century ago and challenge the traditional narrative on the emergence of metallurgy at Çatalhöyük, and beyond.

Research funded by UCL Qatar and McDonald Institute for Archaeological Research.

Pyrometallurgical samples from Çatalhöyük cast in resin block and prepared for detailed microstructural and compositional research. Note 15 locations marked for inspection, some of which contain molten copper metal in their peripheral sections.



Contexts of and Relations between Early Writing Systems (CREWS)

PHILIPPA M. STEELE (*McDonald Institute*)



CREWS project logo, designed by P.M. Steele.

The project informally known by its acronym CREWS began in April 2016 and will run for five years. The focus is on a specific set of writing systems in use in the highly interconnected ancient eastern Mediterranean, looking into the links between individual scripts as well as the sociocultural background against which they were used and maintained.

As Principal Investigator, McDonald Affiliated Fellow Philippa Steele will be directing a team investigating these aspects, although over the summer of 2016 she has been working alone while recruiting the other team members—including two Research Associates (Dr Philip Boyes, working on writing at Ugarit, and another to be recruited in 2017) and a PhD student (Natalia Elvira Astoreca, working on the early development of the Greek alphabet).

The project's research has a strong interdisciplinary focus and will centre on two sets of research questions. Firstly, how can we tell how writing systems were related to each other, and how writing was passed on from one group to another? And secondly, what difference does social context make to writing, and what difference does writing make to society? The writing systems under consideration are ones that will allow us to reconstruct these relationships over a long time-frame in a broad area of the Aegean, eastern Mediterranean and Near East: the Bronze Age Aegean scripts (Cretan Hieroglyphic, Linear A and Linear B), the Ugaritic cuneiform alphabet and the first-millennium BC linear alphabets developed for Phoenician and Greek (among other languages).

Steele's research in the first six months of the project has concentrated on several different lines of investigation, including work on her forthcoming monograph on *Society and Writing in Ancient Cyprus*, a comparison of the spheres of use of Cypro-Minoan and Linear A and a 'language-blind' approach to early alphabetic systems. Planned activities for 2016–17 include outreach work with schools and a conference on early alphabets in March 2017.

Project funded by the European Research Council.

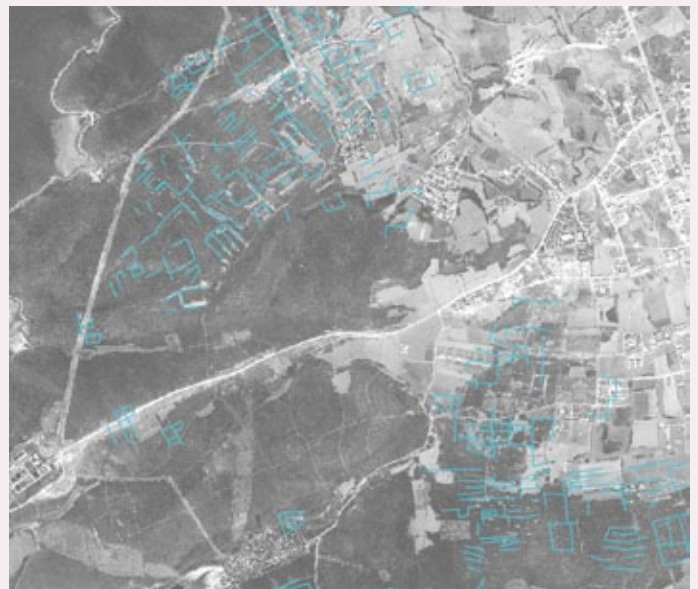
Digital Survey on the Milesian Peninsula

TOBY C. WILKINSON & ANJA SLAWISCH

As part of the wider international collaborative Project Panormos programme (based on the Milesian peninsula, today in western Turkey), an international team working through the McDonald Institute used an unexpected hiatus in fieldwork during the summer of 2016 to devote time and labour into the development of two strands of the project's digital survey methodology. One involved comparing historical aerial photography of the peninsula with modern multispectral satellite imagery to identify ancient sites and structures, as well as highlighting the effects on the landscape of recent tourist-oriented developments. The other involved a detailed review and improvement of our Open Science approach to fieldwork data collection and dissemination—a pilot designed to find ways to make archaeological results more transparent and 'reproducible' (part of which includes plans for a suitable repository for reproducible archaeology at Cambridge).

Website: <http://www.projectpanormos.com/>

Funding for this year's work was provided by the McDonald Institute and the Deutsches Archäologisches Institut Istanbul, as well as the Gerald Averay Wainwright Fund. Administrative help from the Milet Museum.



Stone field boundaries visible in 1960s aerial photography overlaid onto satellite imagery from 2006. (Base map: Worldview-2 imagery, copyright Digital Globe; field boundaries digitized by Michael Loy.)

Keros, Greece

COLIN RENFREW & MICHAEL BOYD (*McDonald Institute*)

Since last year's report, Colin Renfrew and Michael Boyd have completed the Southeast Naxos Survey (in 2015), indicating clearly the extent to which the region was occupied in the early Bronze Age, with resumed intense activity in the late Roman and Byzantine periods. Excavation has resumed on Dhaskalio (Keros), the counterpart of the rich special deposits with which it forms the world's earliest maritime sanctuary, dating from c. 2750 to 2300 BC. Among interesting discoveries is the stairway (pictured), giving access to the site from the now-submerged causeway which links the settlement (Dhaskalio) with Kavos on Keros, where the Special Deposits are located. This year, an iPad-based digital recording system on site has permitted a paper-free excavation, using the iDig recording system, while planning has been replaced by photogrammetry conducted on a context-by-context basis, with the aid of georeferenced drone and hand-held photography. A field school was run in conjunction with the Cyprus Institute and Dr Evi Margaritis.

Work on these projects has been funded by the Institute for Aegean Prehistory, the Cyprus Institute, Gerda Henkel Stiftung, the British Academy, the Leverhulme Trust, the McDonald Institute for Archaeological Research, the Society of Antiquaries of London and the British School at Athens.



KEROS EXCAVATIONS

Work in progress on the newly discovered stairway, giving access to the settlement at Dhaskalio, Keros.

Nazi Camps on British Soil

GILLY CARR (*Institute of Continuing Education*)

The third and final season of excavation took place in 2016 at Lager Wick, a forced labour camp in Jersey, which was in operation from 1942–44. This year we finished excavating the so-called latrine block and further uncovered the guards' mess hut, first identified last year. In this latter structure, small finds of note this year included a lead eagle and a padlock.

Despite the high number of toiletry articles which led to the interpretation of the 'latrine block' last year, the full excavation of this structure revealed that it more likely functioned as a kitchen and food store for the camp. As no drainage facilities were uncovered for the latrine itself, it became apparent that it was probably a somewhat less glamorous potato store. This new interpretation explains the two caches of shellfish from the local beach found within the building—a useful food source for starving labourers.

This new identification allowed a better understanding of the use of space—and architecture of confinement—of the camp. An information board outside the camp is the first sign of 'heritageization' of any labour camp in the Channel Islands.

The excavation blog can be read at:
<http://gillycarr.wordpress.com/>

Nazi Camps on British Soil was funded by the McDonald Institute in 2016.



GILLY CARR

Padlock found in the foundations of the guards' mess hut.

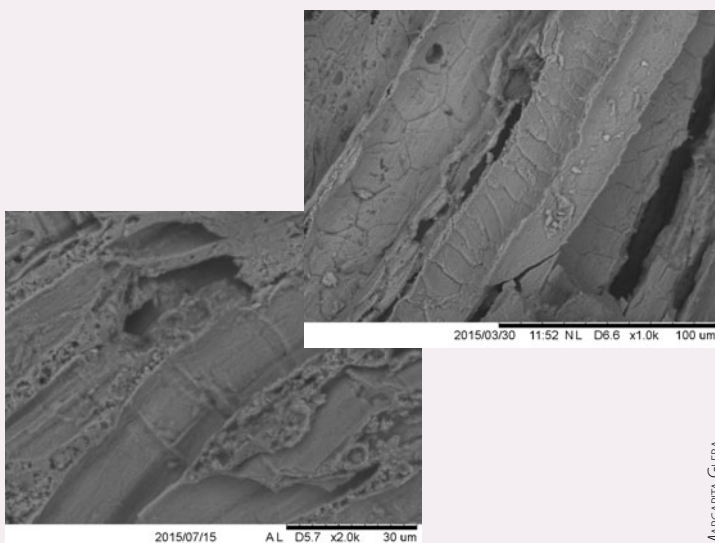
Textile Production and Consumption (PROCON)

MARGARITA GLEBA (*McDonald Institute*)

The PROCON project focuses on the significance of the production and consumption of textiles for the development of city-states in Mediterranean Europe during 1000–500 BC. The project has developed collaborations with over 50 universities, museums, archaeological services and conservation centres across the world. This year we continued data collection in museums of Italy, Greece and Spain, recording textiles, tools and iconography. To date, we have recorded almost 300 textile fragments and over 5000 textile tools, including loom weights, spindle whorls, spools and other implements, across our area of study. Fibre analysis using Scanning Electron Microscopy suggests that sheep wool and flax are the two main types of textile raw material used in these regions. Dye analysis of some of the organically preserved textile remains identified shellfish purple, madder and woad among the main dye sources.

Two project milestone workshops were held in Rome and Athens in 2015 and 2016 gathering international experts to discuss the topics related to textile production and consumption in Italy and Greece during the first millennium BC. This year, the project also saw a temporary expansion of the team, with Dr Francesco Iacono contributing research on purple production in the Mediterranean and Dr Bela Dimova collecting comparative textile and tool data in Thrace, Bulgaria. One of PROCON's RAs, Dr Susanna Harris, accepted a lecturer's position at the University of Glasgow and was replaced by Dr Beatriz Marin Aguilera, who is a specialist in Iberian and Phoenician archaeology.

The project is funded by the European Research Council (Starting Grant No. 312603).



MARGARITA GLEBA

Scanning Electron Micrographs of flax and wool fibre casts from Iron Age mineralized textiles.

New work at Falerii Novi (Central Italy)

ALESSANDRO LAUNARO & MARTIN MILLETT (*Faculty of Classics*)

Building on earlier extensive geophysical work (magnetometry) carried out in the late 1990s and early 2000s at Falerii Novi (Central Italy), a new AHRC-funded project was launched in 2015 in order to extend further our knowledge and understanding of the Roman town and its earlier phases of settlement. Thanks to the employment of a multiple array of Ground-Penetrating Radar antennae, this new survey is providing our team with remarkably detailed images of the town's (still buried) archaeology, shedding new light on important issues pertaining to its origin and later development. For example, not only have the plan of the forum and theatre now been firmly established, but a hitherto unknown monumental complex has been identified at the margins of town, attesting to the liveliness of this settlement and its dense occupation. This work is being paired with our thorough (re-)study of finds from earlier (unpublished) excavations by the Italian Soprintendenza, putting special emphasis on the commonware pottery as a potential indicator of hitherto under-represented phases of occupation.

The 2016 season was undertaken in collaboration with the University of Ghent, the British School at Rome and the Soprintendenza Archeologia, Belle Arti e Paesaggio per l'Area Metropolitana di Roma, la Provincia di Viterbo e l'Etruria Meridionale, with support from the Arts and Humanities Research Council ('Beneath the Surface of Roman Republican Cities' project) and the Faculty of Classics.



The 'Porta di Giove', the western gate through the walls of Falerii Novi.



Town and Hinterland. Interamna Lirenas and its Territory through Antiquity

ALESSANDRO LAUNARO & MARTIN MILLETT (*Faculty of Classics*)

The excavation of the theatre at Interamna Lirenas (Central Italy) has been significantly extended and 90 per cent of its plan has now been brought to light (the rest being known thanks to the results of the GPR survey). It is now clear that the theatre had been originally roofed (*theatrum tectum*), in line with other known examples from Italy and the provinces, and that it had undergone some notable structural modifications at a later stage (second phase). Our understanding of the process of post-abandonment spoliation has considerably improved and we recovered evidence of well-coordinated quarry-like activities dating to the Middle Ages: a central processing area (signalled by a thick layer of very small fragments of limestone) surrounded by piles of stone blocks, significantly grouped in accordance with their qualities (e.g. colour). We also uncovered a fragment of a large inscription, part of a dedication to a wealthy freedman (a certain Anoptes), most likely a benefactor of the community of Interamna Lirenas. Further geophysical work (GPR) has been taking place over the rest of the urban area, producing an impressively detailed plan of the town, featuring a dense settlement pattern and a hitherto under-estimated monumental character.

The 2016 season was undertaken in collaboration with the Soprintendenza Archeologia Belle Arti e Paesaggio delle Province di Frosinone Latina e Rieti, the University of Ghent, the British School at Rome and the Comune di Pignataro Interamna, with support from the Arts and Humanities Research Council ('Beneath the Surface of Roman Republican Cities' project), the Faculty of Classics and the Comune di Pignataro Interamna.



View of the theatre of Interamna Lirenas through its southeastern entrance.

Early Upper Palaeolithic Mobility and Technological Decision-Making (PALMOBI)

LUC MOREAU (*McDonald Institute*)

PALMOBI (start date January 2016) brings together lithic technology, petroarchaeology, geochemistry, GIS and environmental modelling to explore the hitherto poorly understood key period between 36,000 and 30,000 years ago which witnessed a series of profound behavioural changes in human evolutionary history, roughly coinciding with the socio-economic change from Aurignacian to Gravettian, two major periods of the Early Upper Palaeolithic (EUP). During this time, we see the emergence of new features such as the earliest unambiguous Upper Palaeolithic burials in Europe alongside patterns of increased residential stability. Using key (open-air and cave) sites from Belgium and Romania, this year featured field surveys in Belgium and Romania to collect geological samples of representative flint types, and study trips to Iași (Archaeological Institute) and Brussels (Royal Belgian Institute of Natural Sciences, RBINS). Geological flint samples and selected lithic artefacts were analysed in the Department of Earth Sciences by means of LA-ICP-MS to discriminate between competing potential sources. Following the petroarchaeological approach recently developed by Paul Fernandes, various types of secondary outcrops have been characterized in the Belgian assemblages by analysing pre-depositional cortical surfaces of numerous artefacts using a reflected light stereomicroscope. This project aims to reassess adaptive variability in the EUP regarding raw material selectivity and technological provisioning in order effectively to substantiate interpretations of mobility change across time and space using an evolutionary framework.

PALMOBI is funded by the European Commission under a Marie Skłodowska-Curie Individual Fellowship and the McDonald Institute for Archaeological Research.



Left: LM during raw material survey on the Prut shore in Eastern Romania. Right: Geological samples mounted in embedding resin for LA-ICP-MS analyses (above); and LM trained by Paul Fernandes (below) in renewed petrography of flint artefacts at RBINS in Brussels.

Roman Production in Central Italy: The Workshop of Montelabate

LETIZIA CECCARELLI, JEREMY BENNETT & SIMON STODDART

The second season of archaeological excavation took place at the Roman kiln site of Montelabate (Perugia, Italy) in 2016. Five kilns, first detected by geophysics and surface survey in 2012, have now been excavated, and provide the most important example of their type in Umbria, located 30 km northeast of Perugia at about 250–300 m asl. The production site is within walking distance of a rich Plio-Pleistocene clay deposit and close to woodland for fuel. The local streams, including the Ventia River, a tributary of the River Tiber, allowed easy communication with Rome.

The new excavation focused on two kilns (one rectangular and one round), where, like the others, the combustion chamber had been preserved, as this part lay underground and was therefore not destroyed by ploughing. The rectangular kiln, orientated north–south, was initially used for the production of wine amphorae, before later being used to make tiles. The round kiln, oriented west–east, was used to produce coarseware.

The workshop, in use from the first century AD, is a rare discovery in the Upper Tiber valley as it is the only amphorae production site that has been stratigraphically excavated. The site therefore offers a unique opportunity to study the *chaîne opératoire* and the commercial network of Central Italy during the Roman period. The kilns were later used to produce tiles and coarseware, providing evidence for a local production system that continued until the late fourth to the fifth century AD.

Alongside the excavation, the project is also developing a method to fingerprint the ceramic production at Montelabate through pXRF analysis, which has been undertaken on Etruscan and Roman pottery as well as on raw clay samples that have been collected near the site.

The fieldwork, under the field direction of Dr Letizia Ceccarelli, forms part of the Montelabate project on the frontier between Perugia and Gubbio, funded in this phase by the McDonald Institute, facilitated by the Gaslini Foundation, in collaboration with the Soprintendenza Archeologica dell'Umbria. The project is under the overall direction of Dr Simon Stoddart and Prof. Caroline Malone (Queen's University Belfast).

The kilns
excavated in
2016, viewed
from above.



MARCO AMADEI

Marzuolo Archaeological Project

ASTRID VAN OYEN (Homerton College)

Was innovation in the past the driver of economic growth that it is today? Studies that have attempted to answer this question for the Roman period have focused exclusively on large-scale productive devices such as watermills. To remedy this, the *Marzuolo Archaeological Project* (MAP) investigates the Roman-period rural site of Podere Marzuolo (Grosseto, Italy), where evidence of production of the Roman empire's most widespread ceramics, so-called *terra sigillata*, has been found in both an experimental and a standardized phase. MAP investigates innovation as a bottom-up process, anchored in craftsmanship, embodied knowledge and community dynamics.

The 2016 excavation season at Marzuolo uncovered a two-cell structure of mixed commercial/domestic nature, which parallels a building excavated at the site in 2012. This shows that the site was the result of concerted planning, which has implications for how a community would have formed in such a setting. In addition, a homogeneous levelling layer had been prepared across a large part of the site before building started, which speaks to the level of investment, an important but elusive parameter in the innovation process.

The 2016 season clarifies the narrative of spatial and chronological development at Marzuolo, into which future seasons can fold the production evidence for *terra sigillata*.

The 2016 excavations were made possible through the generous financial and technical support of the AIA's Cotsen Excavation Grant, a Cambridge Humanities Research Grant, a McDonald Institute Grant and a SPARC fieldwork award.



The 2016 team of the Marzuolo Archaeological Project.

Aerial view
of 2016
excavations at
Marzuolo.



PAGIO NANNINI



In the Footsteps of Ancestors: From Thomas Ashby to David Trump

SIMON STODDART

The monuments of Malta have attracted the attention of many scholars. From the early twentieth century their interest took the form of the first systematic excavation. At Santa Verna and Kordin, the current FRAGSUS project has followed in the footsteps of the important collaboration of Themistocles Zammit and Thomas Ashby of the 1910s. At these sites, the scientific background of Zammit was combined with the excavation experience and classical training of Ashby, the then director of the British School at Rome. Ashby was unable to excavate in Italy, so turned first to the classical remains of Malta, then part of the British Empire, and quickly to the more substantial prehistoric remains.



The excavation of Santa Verna by Thomas Ashby in 1911.



David Trump excavating in Gozo in the 1980s.

The collaboration with David Trump is more recent, since he was the senior director of the original Cambridge Gozo Project of the late 1980s and early 1990s, and we have continued to follow in his footsteps, most notably at Santa Verna and Skorba. David's association with Malta, however, goes back much further into the 1950s, when he worked with John Evans. He will, however, be principally remembered for his excavation of Skorba, where he established for the first time the early prehistoric sequence of the Maltese islands calibrated by radiocarbon, whose importance was celebrated by Colin Renfrew. David Trump was much revered in Malta for showing that

the small, now independent, island state has the oldest free-standing stone monuments in Europe, and, with careful definition, in the world. For these achievements, he received the highest recognition of both the state and the University of Malta before his death in August 2016.

The Fragsus project is financed by the European Research Council (PI Caroline Malone. Queen's University Belfast).

Understanding the Landscape of the 'Temple'

SIMON STODDART

The work of Cambridge in Malta has concentrated since the late 1980s on the Xaghra plateau, the landscape surrounding the 'temple' of Ggantija. This monument has been recognized for many centuries, and provided a target for early illustration and more recent photography both from across the valley and from the air. These illustrations and photos record the changing condition of the monument in a highly fragile landscape threatened by erosion and new elements of the built environment.

The recent research shows how such monuments provided focal points of more stable soils placed close to reliable water sources in an otherwise vulnerable landscape. Early excavation records show that food was probably distributed from these significant places with apparent largesse, perhaps offering ritualized stability in a more uncertain island world. The ritual context of this cultural certainty was critical, and we have explored the soundscape of the surviving monument with the assistance of Magdalene College choir (p. 47).

The new visitor centre, which already records the evidence from the cemetery of the Brochtorff Xaghra Circle, has some suitable empty spaces where Heritage Malta will be able to update the public with the recently collected evidence.

The FRAGSUS project is financed by the European Research Council (PI Caroline Malone. Queen's University Belfast). Daphne Caruana (Heritage Malta), the curator of the Ggantija monument, has kindly supported our every activity.



Ggantija from across the valley in the 1920s.

Ggantija from the air, in a RAF photo of 7 October 1937.

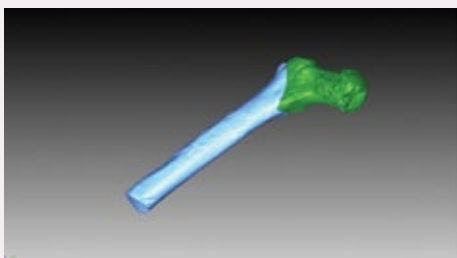


Studying the Temple Builders of Malta

RONIKA POWER, JAY STOCK, EOIN PARKINSON, JESS THOMPSON, TAMSIN O'CONNELL, CATHERINE KNEALE & SIMON STODDART

The past 12 months have been extremely productive for the *Cambridge Bone Crew*. The principal researchers for the *Population History Workgroup*, including Ronika Power, and Bernardette Mercieca-Spiteri (Superintendence of Cultural Heritage Malta), were able to achieve several milestones. They completed the isolation phase of the human skeletal assemblage from the Neolithic Brochtorff Xagħra Circle at the National Museum of Archaeology in Valletta, building on provisional results in the 2009 McDonald monograph publication. Every fragment of the c. 700–900 co-mingled individuals was re-examined for evidence of disease, trauma, congenital variation, occupationally related change and geographical affinity. The team also completed a large-scale isotopic sampling programme for palaeodietary analyses and radiocarbon dating. In parallel, Jess Thompson is analysing the taphonomic history of the assemblage and Eóin Parkinson is researching skeletal biomechanics using 3D laser scanning. A public lecture on the research was given to the Archaeological Society of Malta. A related project has now digitized the excavation plans of the human remains from the Circle in a 3D format employing ArcGIS.

The FRAGSUS project is financed by the European Research Council (PI Caroline Malone, Queen's University Belfast). We are grateful for the logistical support of Sharon Sultana, the Senior Curator of Heritage Malta, the technical support of Catherine Kneale (McDonald Institute) and James McDonald (Queen's University Belfast) and the instruction of Joel Irish (Liverpool John Moores University) for a Dental Anthropology Masterclass. Sara Boyle and Rowan McLaughlin (Queen's University Belfast) were instrumental in setting up the digitizing project. A measure of the success of the project is the appointment of Ronika Power to a permanent position at Macquarie University in Australia during this period and her continued involvement in the project.



Scanned femur from the Brochtorff Xagħra Circle.

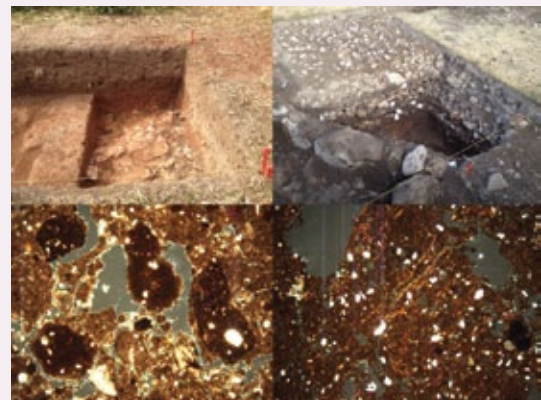
EOIN PARKINSON

The 'Natural' Setting of the 'Temples'

CHARLES FRENCH, SEAN TAYLOR, JEREMY BENNETT, PETROS CHATZIMPALOGLOU & SIMON STODDART

Geoarchaeological fieldwork continued in Gozo and Malta, by focusing on OSL profile sampling at two Neolithic temple sites—Ggantija and Skorba—along with the study of erosion sequences in the Ramla and Marsalforn valleys in Gozo. Continuing analysis of the large suite of thin sections from Neolithic contexts has suggested that a major change started just prior to the 'temples' c. 3800 cal BC. The buried soils on the limestone plateau (i.e. at Santa Verna, Ggantija and Skorba) were changing from a moist, humic, well-developed and clay-enriched soil to one that is becoming leached of fine and humic material and much replaced by secondary calcium carbonates and iron oxides. This strongly suggests human disruption of these brown soils, associated with scrub clearance and cereal cultivation (also testified to by well-dated pollen core analyses from Salinas), as well as the beginnings of aridification, which led to the ubiquitous formation of xeric red Mediterranean soils which are observed throughout the wider region today. Significantly, this is the first time that this transitional phase of soil development has been observed in well-dated archaeological contexts. There is also secure evidence of valley soil erosion capture of this same soil in the Xemxija core dated to the fifth millennium BC. However, the real disruption of the landscape in terms of major land uptake for terraced arable fields, especially on the lower valley slopes, and punctuated pulses of coarse/fine erosion, does not appear to be occurring until the last 400–500 years. The terraces are under study by Jeremy Bennett. Chert and flint resources in comparison with Sicily are under study by Petros Chatzimpaloglou.

The Fragsus project is financed by the European Research Council (PI Caroline Malone, Queen's University Belfast). We are indebted to Tim Kinnaird from the University of Glasgow's SUERC laboratory for the OSL profiling.



Santa Verna temple, Gozo: red terra rossa outside temple (upper left); brown soil beneath interior of temple (upper right); brown clay-rich soil (lower right) to calcitic red soil (lower left) (both 5mm frame width; cross polarized light).

C. FRENCH



Magdalene College choir performing in an aisle of Ggantija.

SIMON STODDART



Modern Humans in the Tisza Valley and Neanderthals in the Middle Dniestr Valley: 2016 Fieldwork in the Ukraine

PHILIP R. NIGST (*Division of Archaeology*)

The *NEMO-ADAP* research project investigates Neanderthal and modern human responses and adaptations to the changing climatic conditions in eastern Europe. Our fieldwork in 2016 focused on the site of Korolevo II in the Upper Tisza valley and the site of Neporotovo 7 in the Middle Dniestr valley (both located in the Ukraine).

Fieldwork at Korolevo II, directed by Vitaly Usik (Museum of Archaeology, Institute of Archaeology, Kiev) and Philip R. Nigst, explored the Upper Palaeolithic part of the site's sequence in two trenches. In one trench, we excavated a well-preserved combustion feature and abundant lithic material. During our fieldwork we also discovered new archaeological horizons at the site and we collected samples for reconstruction of the environmental conditions.

Our fieldwork at Neporotovo 7, a Middle and Upper Palaeolithic site discovered by the project team in 2012, yielded new Middle Palaeolithic lithic assemblages. The 2016 campaign, directed by Philip R. Nigst and Larissa Kulakovska (Museum of Archaeology, Institute of Archaeology, Kiev), focused on detailed stratigraphic, sedimentological and environmental analyses. In the course of this summer's fieldwork we collected more than 60 pollen and more than 80 sediment samples spanning the late Middle and early Late Pleistocene (roughly 180,000 to 50,000 years ago). We plan to continue field and laboratory work at both sites in the coming years.

Project webpage: <https://nemoadapt.wordpress.com>

The project is funded by the Leakey Foundation, EC FP7 Marie Curie Programme (Career Integration Grant [Nr. 322261]), British Academy, Max-Planck-Society (MPI EVA, Department of Human Evolution, Leipzig), Isaac Newton Trust and McDonald Institute for Archaeological Research.



Excavations in progress at Korolevo II, Tisza valley, Ukraine.

Exploring the Aurignacian in Eastern Romania: Excavations at Mitoc-Malu Galben

PHILIP R. NIGST (*Division of Archaeology*)

The 2016 fieldwork of the Mitoc-Malu Galben Research Project (running since 2013) focused on the Aurignacian archaeological horizons. The project, directed by Vasile Chirica (Institute of Archaeology, Romanian Academy of Sciences, Iasi), Pierre Noiret (University of Liège, Belgium) and Philip R. Nigst, combines field and laboratory work with the goal of studying human responses to environmental change through the long loess-palaeosol sequence of 14 m covering more than 10,000 years. The July 2016 fieldwork (by a team of Romanian, Belgian, British, Swiss and American students and scientists) excavated four trenches. In two of these trenches we explored the lower part of the sequence and our primary interest was environmental sampling, while in the other two trenches we excavated early and late Aurignacian deposits with rich lithic artefact clusters. We also collected a number of geoarchaeological and microdebitage samples. With regard to laboratory work, part of the lithic assemblage of the 2015 fieldwork was studied in 2015/16 by Tansy Branscombe as part of her undergraduate dissertation at the University of Cambridge.

The project is funded by a grant from the University of Liège (Fonds spéciaux pour la Recherche, Crédit classique C-13/69), EC FP7 Marie Curie Career Integration Grant (Nr. 322261) and the McDonald Institute for Archaeological Research.



Excavations at Mitoc-Malu Galben, Romania, July 2016.

Environment and Economy in Ancient Campania: Testing Efficiency, Economies of Scale and Ecological Comparative Advantage

ROBYN VEAL (*McDonald Institute*)

My focus this year has moved from finalizing publications for my project on the Fuel Economy of Rome to a new project examining all of the organic data for ancient Campania. Predicated on the fact that ancient economic studies in the classical period have for too long focused on the historical sources, as well as products of construction, transport and burials (i.e. artefacts), this project looks primarily at ecofacts as the basis of the economy. Environmental data (food, fuel, textiles) in fact make up the majority of any GDP, ancient or modern. Campania will serve as the case study and the long-term goal is to rewrite the region's history from 500 BC to AD 500. A preliminary conference to consider how the data may be moderated and modelled was held in March at the McDonald Institute. I had the further delightful job of visiting woodlands in Wales and here, near Cambridge (Hayley Wood), as I pursue the background necessary to write up a section of the late Professor Oliver Rackham's work. Known for his forest and woodland ecology work in the UK and on Crete, Oliver had begun to work on charcoal towards the end of his life. Much missed, his work lives on with new scholarship, and many people shouldering the burden of bringing it to press, together with the ongoing support of Corpus Christi.

Research supported by the DM McDonald Grants Fund and a Hughes Hall Research Grant.



ROBYN VEAL

Pot washing (foreground) and environmental recovery (rear, left), being carried out by students at Pollena Trocchia (a villa rustica with baths, North Vesuvius). Standing, centre, is Maria Rosaria Vairo, environmental field supervisor.

A Horse and Rider

CATHERINE HILLS (*McDonald Institute*)

I continued as president of the Cambridge Antiquarian Society and became editor of the *Proceedings of the Cambridge Antiquarian Society*.

Research continued on early Anglo-Saxon and migration-period archaeology. I visited and advised on several recent excavations of Anglo-Saxon cemeteries and am a member of the 'People and Place' advisory board, a project based at Durham relating to northern England in the early medieval period.

With Steven Ashley of the Norfolk Historic Environment Service, I researched and wrote a paper (forthcoming) on a small copper-alloy figure of a rider and horse, found by a metal-detectorist near Burgh Castle in Norfolk. Comparative analysis suggests this dates to the sixth or seventh century AD, so is one of a very small group of early medieval three-dimensional human representations.



NORFOLK HISTORIC ENVIRONMENT SERVICE

Horse and rider figure from Bradwell, Norfolk: a new Early Anglo-Saxon equestrian image?



Bury Farm, Cambridgeshire: Defining Locality. Community-building along the River Granta, Cambridge

SHEILA KOHRING (*McDonald Institute*)

What does it mean to be a local? It certainly implies a depth of knowledge about the histories of the people, places and activities situated around you. The Bury Farm project explores the changes in landscape knowledge through the kinds of activities conducted in one particular location along the River Granta at Stapleford, Cambridgeshire. The big picture interest is in how local communities use landscape knowledge to build and rebuild themselves over time.

In 2015–2016, focus was placed on exploring an unknown rectangular structure with associated pits located near to Bronze Age ring-ditches and barrows above the River Granta. Excavations included students and volunteers from the local community and located the ‘clean’ ditches surrounding the area and pottery (possibly prehistoric) from interior pits. The project also held a very successful ‘young archaeologist morning’ with nine children joining the team to learn first-hand how to ‘read’ the humps and bumps above the ground as well as helping excavate the pits and levels below the ground.

Significant contributions this year have come from long-term team members and Dr Kate Boulden and Dr Jenni French, who helped co-direct excavations in 2016. The project and team work with the local community and with the local farmer to continue building narratives of locality with knowledge about the past environment, river and people who lived near the river at Stapleford, Cambridgeshire, in the past.

The project continues to be supported by The McDonald Institute for Archaeological Research, Corpus Christi College and the ACE Foundation.



S. KOHRING

Bury Farm: Emma Smith, ex-student, excavating in the Bronze Age ring ditch.

Aldborough, North Yorkshire

ROSE FERRABY & MARTIN MILLETT (*Faculty of Classics*)

Preliminary work on a second stage of the project on the Roman town of *Isurium Brigantum* [Aldborough] commenced following the completion of the stage 1 fieldwork (the magnetometry survey) in 2015. The main focus has been on gaining a better understanding of past excavations, providing accurate georeferenced plans of these interventions and relating them to the results of our survey. The results of this work have now been incorporated into a new English Heritage guidebook to the site, published in 2016. Importantly, the evidence from eighteenth- and nineteenth-century records now provides key new information about the early development of the planned town, suggesting that it is of two phases. This research has also contributed to the first draft of a long-term research plan for the site.

As part of this work a trench was cut across part of the area excavated in the 1840s. This revealed the well-preserved remains of a domestic bath-house situated at the northwest corner of a substantial courtyard house (the plan of which can be understood through our GPR survey in 2015). Importantly the work confirmed the accuracy of the nineteenth-century excavation plans and showed that the quality of those excavations had been high, leaving the Roman structures in a good state of preservation. The excavation also allowed us to trial methods of 3D recording which we intend to use in future excavations.

Thanks to the Faculty of Classics, and an anonymous donor for funding this work.



ROSE FERRABY

Trial excavations in progress on the baths of a house at Aldborough.

Property Rights, Migration and Cultural Change

SUSAN OOSTHUIZEN (*Institute of Continuing Education*)

It is an archaeological commonplace that grazing across extensive pastures in many periods was shared, often over extended lengths of time, by kin-based communities who met there seasonally in large groups. These explanations are richly implicit with models of social relations – there were large communities, they were made up of one or more extended family groups, they shared pasture, and they had regular assemblies. My work focuses on the usefulness of established economic theory on the collective governance of shared resources in understanding how such interpretations might work in practice.

The results, both general and specific, were published in three papers during 2016. The first argued that, if resources were indeed shared between communities, specific aspects of their social organisation can be predicted. A second paper tested the ‘elite replacement’ model commonly used to explain the origins of ‘Anglo-Saxon’ England against the continuities in the governance of shared resources. Long-term continuities in the latter indicate that assimilation of early medieval immigrants is more likely than the displacement or replacement of existing elites. A third paper offered a detailed test case based on the early medieval East Anglian fen basin. It concluded that demographic, political, linguistic and archaeological evidence suggests that ascribing early medieval cultural change to the influence of migration is becoming more, rather than less, problematic.



The Weirs, Burwell, a fen-edge catchwater drain embanked on its fenward side.

Prehistoric Mining Landscapes in West Wales: Fieldwork and Excavations

SIMON TIMBERLAKE (*McDonald Institute*)

The excavation of a large kerb cairn at Pant Morcell, Cwmystwyth was carried out in 2016 as part of the continuing investigation of this Early Bronze Age mining landscape.

Although now denuded by weathering and the damage caused by eighteenth-century lead miners, the original appearance of this monument would have been impressive, with stone slabs up to 1.5 m high forming a 9 m diameter kerb circle and a central stone setting; many of these orthostats having been quarried and shaped *in situ*. Just as importantly, this site can now be linked to contemporary mining activity following the discovery of broken-up vein rock and mineral strewn across the pre-cairn ground surface.

From a central stone pit setting within the cairn came a possible cremation associated with a small box-shaped stain, and from under one of the adjacent slabs, two halves of an intentionally broken and carefully placed polished stone macehead.

To the east of the cairn, fieldwalking revealed another mine similar in size to the one already investigated on Copa Hill (1989–2002), the new site being about a kilometre to the west of it: indications perhaps that we are looking one of the most extensive tracts of Bronze Age mining in Britain. Geophysical prospecting for the signs of associated settlement or smelting evidence continues within this upper part of the Ystwyth Valley.

The project has been funded by the Early Mines Research Group (UK) and TigerGeo Ltd.



Pant Morcell kerb cairn with one half of a polished stone mace head.

McDonald Annual Lecture

🕒 **18 November** NORMAN YOFFEE (*University of Michigan, Institute for the Study of the Ancient World, New York University*) - Counternarratives of Early States in Mesopotamia (and Elsewhere)

McDonald Distinguished Visitor Lectures

🕒 **27 October** TIM PAUKETAT (*University of Illinois*) - Being and Nothingness in pre-Columbian North America

🕒 **4 May** STEPHEN HOUSTON (*Brown University*) - Sounding Off: Murmurs, Quotes, Cries and Cackles in Maya Glyphs

Raymond & Beverly Sackler Lectures

🕒 **4 November** First Distinguished Lecture in Archaeology in honour of Professor Norman Hammond. PETER ADDYMAN (*Founding Director, York Archaeological Trust*) - Creating Heritage: Vikings, Jorvik and public interest archaeology

🕒 **5 May** Second Distinguished Lecture in Archaeology in honour of Professor Norman Hammond. STEPHEN HOUSTON (*Brown University*) - Founder's Effects: Maya Dynasty and Kingship in the Temple of the Night Sun

McDonald Institute Seminars

🕒 **14 October** MARIA CARMELA GATTO (*University of Leicester*) - At the Border between Egypt and Nubia: Ten Years of Archaeological Research in the Aswan-Kom Ombo Region

🕒 **21 October** FRANCESCO IACONO (*University of Cambridge*) - The Social Logic of Encounter in the Late Bronze Age Mediterranean

🕒 **28 October** MILJANA RADIVOJEVIĆ (*McDonald Institute*) - A Rocky Relationship: On Invention, Innovation and Collaboration at the Dawn of the Metal Age in the Balkans

🕒 **4 November** DAVID FRIESEM (*McDonald Institute*) - Hunter-gatherers' Use of Space in Tropical Environment: An Ethnoarchaeological Multidisciplinary Study

🕒 **11 November** Postdoc Forum - Research Outreach: Dealing with the Press

🕒 **26 November** ALICE LEPLONGEON (*McDonald Institute*) - Discussing a Back-to-Africa Dispersal at the End of the Pleistocene: A Comparative Analysis of Lithic Assemblages from the Levant and Nile Valley

🕒 **2 December** EMMANUELLE HONORÉ (*McDonald Institute*) - Man Behind the Images: Saharan Rock Art as a Palaeosociological Archive

🕒 **20 December** AURÉLIAN MOUNIER (*University of Cambridge*) - *Homo heidelbergensis*: More About the 'Muddle in the Middle'

🕒 **27 January** BEATRIZ MARIN-AGUILERA (*University of Cambridge*) - Beyond Post-politics: Hybridity in the Central-Western Mediterranean Early Iron Age

🕒 **10 February** Q & A Session - Consultancy, Intellectual Property and Related Issues

🕒 **24 February** MATTHEW EDGEWORTH (*University of Leicester*) - The Anthropocene: Is It Relevant to Archaeology?

🕒 **2 March** JOANNE CUTLER (*University of Cambridge*) - Reading Between the Lines: Interpreting the Material Evidence for Textile Production and Textile Technology in Late Bronze Age Crete

🕒 **20 April** MARCUS BRITAIN (*Cambridge Archaeological Unit*) - Understanding Britain's Largest Hillfort: Recent Excavations at Ham Hill, Somerset

🕒 **4 May** FABRIZIO GALEAZZI (*University of York*) - Web-based 3D Visualisation and Archiving for Excavation Data: New Approaches and Methods

🕒 **11 May** JOSEPH LORENZ (*Central Washington University*) - From Genome to Joenome: Searching for Personal Origins in the Age of 23andMe

🕒 **25 May** LUC MOREAU (*University of Cambridge*) - Geochemical Sourcing of Flint Artifacts: Testing Hypotheses on Mobility and Raw Material Economy

Garrod Research Seminars

🕒 **15 October** KRISH SEETAH (*Stanford University*) - Multidisciplinary Approaches to Investigating a 'Disease Basin': A Case Study from the Indian Ocean

🕒 **29 October** SUSAN ALT (*Indiana University*) - The Religious Provocations of a Native American Civilization: Evidence from the Emerald Shrine Center

🕒 **12 November** AUGUSTA McMAHON (*University of Cambridge*) - Garbage, Graves, Graffiti and System D: The Urban Edge Zone at Tell Brak, Syria

🕒 **26 November** GAVIN LUCAS (*University of Iceland*) - Historical Archaeology in the North Atlantic and Excavations at a Bishop's Seat in Iceland

🕒 **21 January** ELIZABETH DeMARRAIS (*University of Cambridge*) - Place-making and Collective Agency in the South Andes

🕒 **4 February** CHRISTOPHER EVANS (*University of Cambridge*) - Thinking Sequences: Time in Land and 'Total Archaeologies'

🕒 **18 February** JAMES BARRETT (*University of Cambridge*) - Northern Journeys: Investigating Commodity Trade AD 900–1400

🕒 **3 March** CHRISTINE HASTORF (*University of California, Berkeley*) - Heads of State: The Resilience, Power and Life-force of Andean Crania

🕒 **28 April** JAY STOCK (*University of Cambridge*) - Understanding Habitual Behaviour and Adaptability Through Human Osteology

🕒 **12 May** CHRIS GOSDEN (*University of Oxford*) - English Landscapes Project

Conferences and Workshops

🕒 **17 October & 7, 28 November** Personal Histories Film Making Workshops

🕒 **7–8 December** Art and Brain: How Imagery Makes Us Human

🕒 **10–13 December** Textual Archaeology of the Ancient Near East: Are We Doing It Wrong?

🕒 **22 January** Keynote Public Lecture for the 2016 Budge Symposium: HARCO WILLEMS (*University of Leuven*) - Reconstructing ritual action patterns from archaeological remains: The case of the tomb of Djehutynekht at Dayr al-Barsha'

🕒 **12–13 March** Environment to Economy of Ancient Campania Workshop: Moderating and Modelling the Data

🕒 **6 May** Mayan Hieroglyphics Workshop

🕒 **17–18 May** Workshop on 3D Digital Technologies and Archaeology

🕒 **18–19 May** Ancient Topography, Landscape Archaeology and Human Landscape Workshop

🕒 **25–26 May** Workshop on pXRF Technology

🕒 **20–21 September** SHARING The Archaeology and Anthropology of Hunter-Gatherers

🕒 **29 September–1 October** Current Approaches and New Directions in Lithic Analysis: Defining, Identifying and Interpreting Variability

Discussion Groups

The **African Archaeology Group** (AAG) was set up in 2008 to revive the African Seminar previously established by Dr John Alexander. Its aims are to discuss current research programs and results of Cambridge archaeologists working in Africa, to hold seminars by Africanist speakers, to bridge University departments and research bodies interested in Africa's past, and to maintain the tradition of Cambridge's long-standing involvement in African archaeology.

Contact: Ceri Shipton (cbks2@cam.ac.uk); Shadia Taha (st446@cam.ac.uk); Laurence Smith (ls101@cam.ac.uk).

The **Americas Archaeology Group** is open to anyone interested in archaeological and anthropological research projects throughout the Americas. Presentations are given by research students, postdocs, visiting scholars and lecturers from the UK and overseas institutions. Meetings are usually held Monday afternoons in the McDonald Seminar Room. A trip to the pub tends to follow for lively, informal discussions. All are welcome!

The **Ancient Near Eastern Seminar Series** attracts speakers from the UK and overseas institutions and offers a focus for the wide range of Assyriological and Ancient Near Eastern archaeological projects across the University, builds links with other research centres and offers a chance for all to see the work that is being carried out in this large and important field of research.

Contact: Martin Worthington (mjw65@cam.ac.uk).

The **Archaeological Field Club** (AFC) provides a range of lectures, site trips and other events to broaden the knowledge of, and further enthuse, those with an interest in archaeology.

Contact: Tansy Branscombe (tlb31@cam.ac.uk).

The **Art Group** provides a forum for the exchange of ideas about visual art, including prehistoric as well as contemporary art. Alongside presentations focusing on prehistoric art of the world, we will also consider how our existing understanding of contemporary art influences the way we look at and construe interpretations of prehistoric imagery and vice versa.

Contact: Liliana Janik (lj102@cam.ac.uk).

The **Asian Archaeology Group** (AsAG) aims to provide a forum for new research and discussion for those working in the field of Asian archaeology. We have talks every other week that cover the Asian continent in all its diversity – from megaliths in Borneo and minarets in Turkmenistan to phytoliths in India and starch grains in China!

Contact: Ting An (ta343@cam.ac.uk).

The **Egyptian World Seminar Series**, supported by the Mulvey Fund, continues to present recent research and discussions regarding Egyptology. It attracts speakers from around Britain and the EU who cover all aspects of Egyptology as anthropology, archaeology, philology and museum studies.

Contact: Meghan Strong (mes66@cam.ac.uk).

The **Garrod Research Seminars** represent the Department of Archaeology's main series of invited scholarly lectures. Each year they relate to a specific theme.

Contact: Cyprian Broodbank (cb122@cam.ac.uk); Marie Louise Stig Sørensen (mlss@cam.ac.uk).

The **George Pitt-Rivers Lunchtime Seminars** are generally given by researchers based in or around the University of Cambridge. They are primarily aimed at researchers working in the archaeobotany, genetics and isotope laboratories in the McDonald Institute, but cover a wide range of topics.

Contact: Cynthia Larbey (cdal3@cam.ac.uk); Ting An (ta343@cam.ac.uk).

The **Heritage Research Group** is made up of graduate students, academics, heritage practitioners and other interested parties. In addition to helping organize the annual Cambridge Heritage Seminar (a successful international conference), the main focus of the Heritage Research Group is its seminar series. The seminars aim to bring together researchers from diverse disciplinary backgrounds, whose projects cover a wide range of topics within the broad field of heritage.

Contact: Dacia Viejo Rose (dv230@cam.ac.uk).

The **Later European Prehistory Group** welcomes everyone interested in the European Neolithic, Bronze and Iron Ages.

The group provides an informal and friendly setting for the exchange of ideas, dissemination of research results and the discussion of current topics of interest. Professionals, students and academics are invited to contribute.

Contact: Simon Stoddart (ss16@cam.ac.uk).

The **Medieval Archaeology Group** meets to discuss recent research on historical archaeology from the fifth to fifteenth centuries AD.

Contact: Susanne Hakenbeck (seh43@cam.ac.uk).

The **PalMeso Discussion Group** for all things Palaeolithic–Mesolithic has continued to attract guest speakers from all around Britain, as well as providing a forum for Cambridge MPhil and PhD students to present the results of their own research in a relaxed atmosphere.

Contact: Emily Hallinan (esh27@cam.ac.uk); Rachel Reckin (rjr57@cam.ac.uk).

TAT (Thinking About Things) is an informal fortnightly meeting which takes place in the Material Culture Laboratory. TAT hopes to capture a spirit of enquiry and to create a community of like-minded individuals, postgraduate students and postdocs, who are trying to come up with ways to make social sense of the material worlds they are studying.

Contact: Sheila Kohring (sek34@cam.ac.uk); John Robb (jer39@cam.ac.uk).

The **Zooarchaeology Discussion Group** showcases zooarchaeological and osteoarchaeological studies undertaken in the Institute.



Prehistory Day (24 October 2015)

Always a highlight of Cambridge's annual Festival of Ideas, Prehistory Day attracted a large crowd, sparking interest in archaeology among participants from toddlers to their grandparents.

We branched out from Prehistory by inviting the Viking re-enactors from 'History off the Page' again, so popular had their horn blowing, sagas, writing of runes and mock charges proved in 2014.

As usual, there was plenty of opportunity to get down and dirty with pottery, rock art, wood dyeing,

metal smelting, bread baking, den building, face painting and leather tanning as well as the chance for people to let their primordial hunting instincts surface by trying their skills with a bow and arrow and a spear thrower.

The wood-fringed grounds of the Cambridge Archaeology Unit provided a perfect setting on a warm autumn day and postdoc, student and admin staff volunteers and demonstrators enjoyed themselves as much as the public.



Viking charge!; Viking crafts; Making Viking pottage; Skinning a deer with a flint knife.

Science Day (19 March 2016)

Archaeology is always a proud contributor to the University of Cambridge's annual Science Festival. This year's event proved as popular as ever as members of the public flocked from far and wide to enjoy a wide range of activities to show them that there is far more to archaeology than piles of broken pots!

Our portable microscope allowed people to examine the fibres of their clothing in detail and analyse stains and spillages; a model test-pit was used to teach the principles of stratigraphy; and

identifying animal skulls and examining pathologies evident in bones enabled people to sample the delights of zooarchaeology. Examining thin sections under the microscope showed just how much geoarchaeologists can dig from the dirt.

Visitors were fascinated by the way modern scientific techniques can help solve puzzles of the past, such as where people came from, what they ate and how economies worked. We always hope to inspire the scientists of the future and, from comments overheard, we seem to be doing something right.



Team Archaeology!; Learning about bones with Ana Marin; Examining under the microscope with Emuobo Orijemie; Getting messy with material culture.

The St John's Archaeology Summer School

To mark the launch of the new Tripos, St John's College agreed to fund a residential summer school for sixth-formers, which took place 25–28 July 2016. Like all Archaeology outreach events, it was entirely free to participants, and generous travel subsidies were available. Forty-three took part, 28 from state schools. With home locations including Scotland, Cornwall and Kent, they quite literally came from every corner of the realm (not to mention one who flew over from Los Angeles!).

The programme was designed to expose participants to the full intellectual breadth of the new Tripos, from Archaeological Excavation to the Huns, Human Evolution, Osteology, and Egyptology and Assyriology. Lectures were given by members of the Division of Archaeology, the Duckworth Collection arranged a sumptuous practical (including various sorts of osteological deformations, and a cheerfully smelly mummy head), the St John's Admissions Tutor led a session on making a competitive application to Cambridge, and there were Egypto-Mesopotamian tours of the Fitzwilliam Museum, as well as sessions on Akkadian and Egyptian language.

Excavation training, led by the Cambridge Archaeological Unit, took place in the grounds of Jesus College, following the format of square-metre test pits successfully used by ACA. A total of 3083 items, weighing over 39 kg, were unearthed. They included five sherds of Romano-British pottery, medieval ones, a few eighteenth-century bricks, a wall, assorted bones and many Victorian wares. Their significance for the broader history of Medieval, Early Modern and Victorian Cambridge was explained by Craig Cessford, in a presentation where he contextualized the finds.

We were tremendously impressed by participants' liveliness, friendliness and intellectual acumen, and it was reassuring that the participants also liked us—in their feedback forms, they all rated the event 'fantastic'! Sixteen participants have applied to the new Tripos, which both suggests how useful Access events can be, and makes it all the more excellent news that Homerton will be running a summer school in 2017!

Studying Ancient Egypt and Mesopotamia at University: A Conference for Sixth-Formers

It is a distinctive and important feature of the new Archaeology Tripos that it includes Egyptology and Assyriology: students can specialize in these subjects from the first year, or do them to a lesser extent in the first year, and specialize in the second.

In the context of launching the new Tripos, we decided as an experiment to promote Egyptology and Assyriology at Cambridge within the context of promoting these subject areas at large. To this end, we convened a conference for sixth-formers at the British Museum, which took place on 5 May, with representatives from eight different Universities.

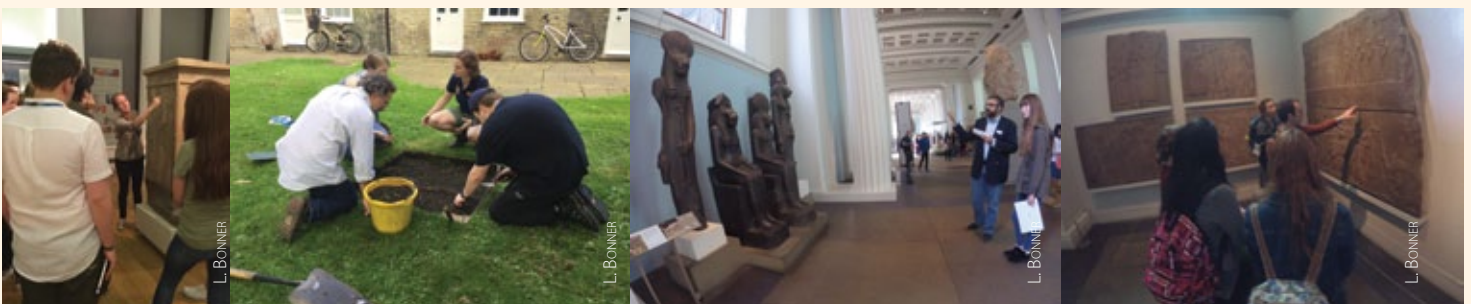
Over 50 students from 24 schools from across the UK attended the conference. Travel subsidies were available, and enabled two participants to come from Lancashire.

The students heard presentations by experts from the British Museum as well as the Universities of Cambridge, Oxford, Liverpool, Cardiff, Swansea, UCL, Durham and SOAS. They also enjoyed tours of the Egyptian and Mesopotamian galleries and took part in a 'treasure hunt'. There was the opportunity to meet current students from many of the institutions in the UK that teach these subjects.

A panel on careers involving recent graduates showed the breadth of jobs which degrees in Egyptology and Assyriology can lead to, from business and consultancy to commercial Archaeology and to further research. This was no doubt a significant factor in all but one of the feedback questionnaires saying that the event had made the respondent more likely to study Egypt and Mesopotamia at University.

Comments by participants included: 'It was fantastic; thank you for the experience', 'An awesome day, really enjoyed it and learnt a lot of new information', and 'I loved seeing everything and hearing the various talks. It has reaffirmed everything that I've hoped for.'

From the point of view of admissions strategy, it was interesting to see that 13 of the participants also attended the St John's summer school, showing how multiple events can function interactively.



Touring the Fitzwilliam Museum with Kate Spence as part of the St Johns Summer School; Excavating at Jesus College.

BM Day: Hrach Papazian gives a tour around the Egyptian section; Martin Worthington reads a Neo-Assyrian royal inscription.

Teaching Historic Landscapes

In partnership with the Historic Royal Palaces learning team, a Teacher Training event for GCSE History teachers was held at the Tower of London on 27 June 2016, to help them meet the new requirement that every GCSE History syllabus should include an element of assessed coursework on 'historic environments'. More than 20 teachers heard talks by four members of the Division. There was considerable appreciation from the teachers about the role of landscape context and archaeology and how they could incorporate it into their teaching of historic landscapes in the new curriculum.

Comments included 'Fascinating presentations and ideas', 'It was a very interesting day, thank you', and 'Thank you, it was brilliant!'



L. BONNER

Martin Jones explains bioarchaeology to local science teachers.



L. BONNER

Preston Miracle discusses zooarchaeology with local science teachers.

How Science Informs Archaeology

Exploratory dinner conversations with local science teachers indicated that there is little awareness of Archaeological Science in schools, and that such awareness could be fostered to mutual benefit. We thus organized a twilight teacher training event for A-level science teachers on 21 June.

Physicists, Biologists and Chemists from Hills Road Sixth Form College, Parkside Federation Academies, Cambridge Regional College, The Stephen Perse Foundation and Comberton Village College enjoyed presentations from our Archaeological Scientists on 'Science in Archaeology—Isotopes and Palaeodiet', 'Climate Change and the Indus', and 'Imaging and Digital Modelling'. We much appreciated Cameron Petrie and Tamsin O'Connell coming to talk, given they were on sabbatical. There were also lab tours for Geoaarchaeology, Zooarchaeology and Bioarchaeology.

Feedback was highly positive: 'It's so interesting to see the range and variety within the discipline and cross-curricularity; I'd love to have more time hearing about the work of the scientists', and 'I enjoyed the wide range of areas covered. The lab visits were interesting and it was great to talk to members of the department. I had no idea that archaeology covered such a wide range of related disciplines'.

One teacher remarked, 'It would be great to have an event like this for students to give them an insight into Archaeology, as maybe it's an area they might not have considered'. So there's something to think about!

Masterclasses

The Cambridge Admissions Office organizes a number of subject-specific Masterclasses every year. In 2015–2016, two were devoted to Archaeology. Members of the Division addressed c. 100 sixth formers selected for academic ability and interest in the subject, giving presentations on their specialist interests.

The Outreach Mailing List

To facilitate communications between the Division and potential applicants to the new Tripos, we have instituted a mailing list which anyone can join:

<http://eepurl.com/buyXN5>

Do please forward/circulate! We particularly encourage teachers to sign up, so that they can hear about our outreach events from year to year.

Access Cambridge Archaeology

CATHERINE COLLINS & EMILY RYLEY (*Division of Archaeology*),
ALISON DICKENS (*CAU*)

2015–16 was another busy year for Access Cambridge Archaeology (ACA), with a number of staff changes, but a full complement of Higher Education Field Academies (HEFAs) were undertaken with various community and outreach projects and a programme of events with HLF landscape partnership scheme, *Touching the Tide*. ACA founder and director Carenza Lewis left ACA for the University of Lincoln to take up her new role as Professor for the public understanding of research. Her position was filled by Alison Dickens, Manager at the Cambridge Archaeological Unit (CAU), on a part-time basis. Former ACA administrator Laure Bonner left ACA to become the outreach and communications officer for the Division of Archaeology at the University of Cambridge. She was briefly replaced by Laura James, former receptionist at the McDonald Institute, who left to teach abroad. Currently in this role as ACA administrator is Emily Ryley, an Archaeology and Anthropology graduate (2012) from the University of Cambridge, who was appointed in June 2016. Catherine Collins continued her role as archaeological supervisor, with Jessica Rippengal (Division of Archaeology) providing part-time support for excavation supervision. Dr Jenni French (Peterhouse, Cambridge) continued in assessing HEFA students' written reports as well as delivering sessions on report-writing skills during the HEFA. New support was also given by Eoin Parkinson, Ian Ostericher and Jeremy Bennet who gave lectures to students as well as marking their reports alongside Silvia Ferreri and Kimberley Watt.

Fifteen HEFAs were run in 2015–16 in Bardney (x2), Hillington, Blo' Norton, Southminster, Walberswick,



Students digging at the Hadleigh HEFA, Essex.

Hadleigh, Brundall, Riseley, Sawtry, North Warnborough, East Rudham,* Rampton, Clavering and Long Melford (*indicates village excavated for the first time in 2016). In 2015–16 a total of 498 year 9 and 10 pupils and 40 sixth-form students attended HEFAs from 51 schools, accompanied by 125 school staff, with the University of Cambridge Widening Participation Project funding thereby providing 1570 learner days.

In 2015–2016, 91 per cent of schools or 92 per cent of pupils participating in HEFA were from top or high-priority schools with low levels of progression rates to HE, GCSE attainment and 'Value Added' indices. 40 per cent of HEFA students were from families with no family history of Higher Education. 92 per cent of pupils rated the Field Academy as 'Excellent' or 'Good', and similarly high percentages of pupils were reported as saying they felt they had grown in confidence and learning ability from the experience. Pupils were also much more positive about staying in education in general, with the number intending to apply to a Russell Group university at 96 per cent and to Cambridge at 44 per cent.

Additionally, ACA carried out several community outreach projects in East Anglia throughout 2015–16. As the first phase of the Northstowe (Cambridgeshire) excavations by the CAU came to a close in the autumn, ACA supervised the residents of nearby Longstanton in excavating six test pits through the village to see how their results relate to Northstowe. In conjunction with *Touching the Tide*, ACA ran a weekend test-pitting event in Snape (Suffolk) in the spring where 15 test pits were excavated by over 40 local residents and volunteers, noting a surge of occupation in the village during the eleventh century.



Excavation and recording in one of the trenches at Peterborough Cathedral.



Potential future archaeology students excavating at Jesus College, Cambridge.

ACA and the CAU jointly led an excavation at Peterborough Cathedral at the end of June, where a total of eight trenches and four test pits were excavated by over 150 local volunteers and about 180 primary school children over 12 days. The excavation was in the northwest corner of the cathedral precinct and found remnants of the more recent 'garden' archaeology of the site as well as the backfill from a medieval fish pond! As well as receiving many visitors over the city's Heritage Festival weekend, Alison Dickens has delivered several lectures at the Cathedral about the excavations and their archaeological time frame.

As part of the St John's Summer School for potential archaeology students, two days of the event were set aside for test pitting in Jesus College, Cambridge. The CAU and ACA directed these excavations, guiding 43 sixth-form students digging five test pits over two days at the end of July, identifying the early archaeology of Cambridge as well as later development phases related to Jesus College.

ACA are already planning their 2017 season of Higher Education Field Academies from their new offices on Pembroke Street.

Personal Histories Project

PAMELA JANE SMITH (*McDonald Institute*)

The Personal Histories Project invites figures from the sciences, humanities and arts to explore the stories behind their careers. We organize film-training workshops, public oral-history events and personal interviews to document life history. Our 'Concept to Clip' courses, communicating research through film, are oversubscribed. An example of a research film is <https://youtu.be/yNk-BmQr5SQ>

For other films, visit:

<http://www.sms.cam.ac.uk/collection/750864>

<https://vimeo.com/personalhistoriesproject/videos>

<http://www.personalhistories.arch.cam.ac.uk>

and 'like' our Personal Histories Facebook page. There have been 22,000 downloads of Personal Histories films in 115 countries.

We are pleased to announce that 'Memorial', filmed during the 2014 Memorial for Pamela's late husband, Professor Thurstan Shaw, CBE, FBA, FSA, Onu N'ekwulu Ora Igbo-Ukwu, premiered at the Brighton Film Festival: <https://vimeo.com/175372806>

Our History of the McDonald Institute for Archaeological Research is now public:

<http://sms.cam.ac.uk/media/2106052>

Our History of Duckworth Lab is at:

<http://sms.cam.ac.uk/media/2100255>

In collaboration with the McDonald Institute, Curator Julie Hudson (British Museum), Lisa Westcott Wilkins (DigVentures) and HRH Igwe Barr Dr Martin Nwafor Ezech Idu II, Pamela offers an Introduction to Archaeology each May for Igbo-Ukwu scholars. Pamela continues to work with the British Museum and the National Museums and Monuments of Nigeria to ensure the preservation of the Igbo-Ukwu Bronzes.

The School of the Humanities and Social Sciences, the Thriplow Charitable Trust, the Robert Kiln Charitable Trust, the Cambridge University Students' Union and McDonald Institute fund our projects.



Students and Staff discussing their experiences as minorities in Cambridge, 26 April 2016.

<http://sms.cam.ac.uk/media/2284123>

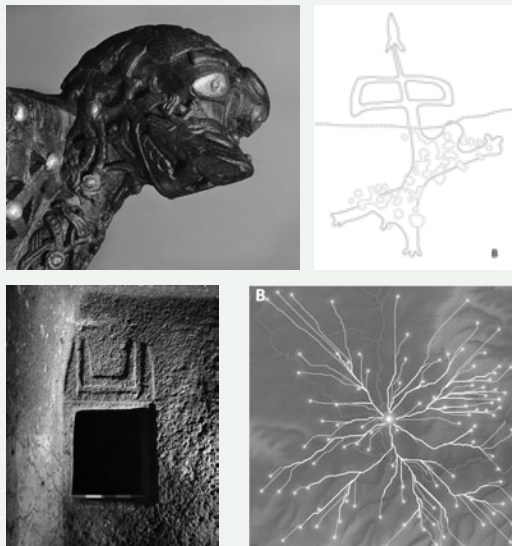
Cambridge Archaeological Journal

JOHN ROBB (Editor)

2015–16 was another strong year for the *Cambridge Archaeological Journal*, with little to report beyond steady and positive vital signs. Submissions to the journal continue steady; with 79 submissions for January–September 2016, we are on course for about 95 overall for 2016. Our acceptance rate is steady or slightly lower than in past years, at about 25–30 per cent of all manuscripts submitted. Our subscriptions rates remained steady, with 2879 subscribers (the great majority of them institutional subscribers worldwide, getting institutional access via consortium deals). We hit 36,990 total full-text downloads in 2015, showing quite an active readership. Revenue continued to increase, with the McDonald Institute receiving £46,808 from the journal in 2015.

Volume 26 (2016) will publish 28 articles within its page budget of 784 pages, covering a wide range of topics from South African rock art to assemblage theory and medieval British towns. In a change of editorial policy, we have lowered our word limit from 12,000 words to 10,000 words, to allow a greater variety of material within our set page budget; this seems entirely positive so far, both in allowing us to cover more topics and in making articles more focused and punchy. Production continues to be very smooth, thanks both to Anne Chippindale and Cambridge University Press's production staff; an increasing number of articles are available pre-publication in CUP's FirstView facility. CUP also included the site in its makeover of the Cambridge Online interface.

2017 promises to be another stimulating year. We are working on re-designing the format of our book reviews, ideally to include further review articles and features, and we have two special thematic sections scheduled, one on assemblage theory (guest-edited by Yannis Hamilakis and Andy Jones) and one on art, material culture and visual culture (non-guest-edited by John Robb).



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- Examining the Presence of Symmetry within Acheulean Handaxes: A Case Study in the British Palaeolithic by JAMES COLE
 - Beads, Exchange Networks and Emerging Complexity: A Case Study from Cambodia and Thailand (500 BCE–CE 500) by ALISON KYRA CARTER
 - From Monuments to Miniatures: Emergence of Stamps and Related Image-bearing Objects during the Neolithic by ÇİĞDEM ATAKUMAN
 - 'A Place Full of Whispers': Socializing the Quarry Landscape of the Wadi Hammamat by ELIZABETH BLOXAM
 - Rites of Passage and Other Rituals in the Life Histories of Objects by LARS FOGELIN & MICHAEL BRIAN SCHIFFER
 - The Evolution of Modern Behaviour and its Implications for Maritime Dispersal During the Palaeolithic by THOMAS P. LEPPARD
- SPECIAL SECTION: Teaching and Learning
- Knowing, Learning and Teaching—How Homo Became Docens by ANDERS HÖGBERG, PETER GÄRDENFORS & LARS LARSSON
 - The Archaeology of Teaching: A Conceptual Framework by FRANCESCO D'ERRICO & WILLIAM E. BANKS
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- A Case for the One-offs: Improvisation and Innovation Within a Copper Age Potting Community by SHEILA KOHRING



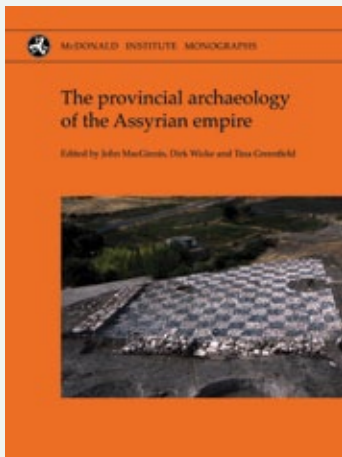
McDonald Institute Monographs

SIMON STODDART (*Acting Series Editor*) & EMMA JARMAN (*Administrator*)

The provincial archaeology of the Assyrian Empire

edited by John MacGinnis, Dirk Wicke & Tina Greenfield

Hardback | £80/US\$116 | ISBN-978-1-902937-74-8 | xviii+390 pp. | 179 figs | 17 tables | 2016 |



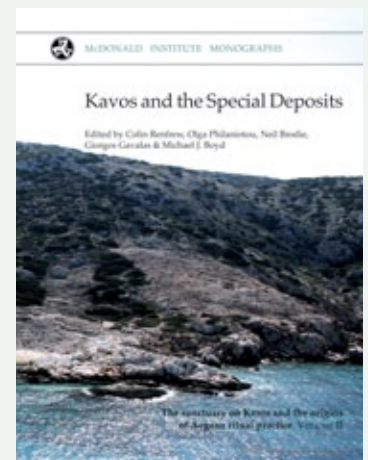
The Assyrian empire was in its day the greatest empire the world had ever seen. Building on the expansion of the Middle Assyrian state in the late second millennium BC, the opening centuries of the first millennium witnessed a resurgence which led to the birth of a true empire whose limits stretched from Egypt to Iran and from Anatolia to the Persian Gulf. While the Assyrian imperial capital cities have long been the focus of archaeological exploration, it is only in recent decades that the peripheral areas have been the subject of sustained research. This volume sets out to synthesise the results of this research, bringing together the outcomes of key investigations from across the empire. The provincial archaeology of the empire is presented in a new light, with studies of the archaeological imprint of Assyria in present-day Israel, Iran, Iraq, Syria and Turkey. A wide range of methodological and interpretive approaches are brought to bear on the data. Analyses of environmental zones and ecofactual datasets, material culture and architectural traditions, the permeation of literacy and the use of para-literate systems form the platform for innovative and integrative evaluations and lead to a new appreciation for the diversity of local responses to the Assyrian expansion.

Kavos and the Special Deposits

edited by Colin Renfrew, Olga Philaniotou, Neil Brodie, Giorgos Gavalas & Michael J. Boyd

Hardback | £64/US\$92 | ISBN-13:978-1-902937-70-0 | xxx+614 pp. | 485 figs | 82 tables | 2016 |

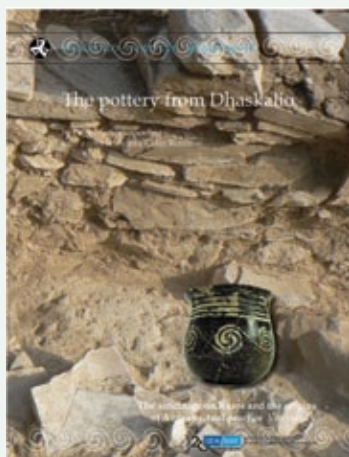
This is the second volume in 'The Sanctuary on Keros and Origins of Aegean Ritual Practice: the excavations of 2006-2008' series. It describes the excavation and finds from the Special Deposits at Kavos at the sanctuary on Keros lying opposite the settlement on the islet of Dhaskalio (described in Volume I). The finds of marble from the Special Deposit South are described in Volume III, and the pottery in Volume V. The sanctuary at Kavos, dating from c. 2700 BC to 2400 BC has yielded the richest ritual deposits of the early bronze age Cyclades. The finds are presented here in their excavation contexts, and the significance of the Special Deposit South as a ritual deposit is examined in the context of Aegean prehistory.



The pottery from Dhaskalio

edited by Peggy Sotirakopoulou with a contribution by Colin Renfrew

Hardback | £64/US\$85 | ISBN-978-1-902937-76-2 | xvii+477 pp. | 392 figs | 63 tables | 2016 |

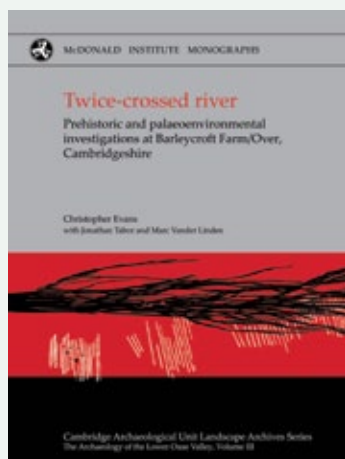


This is the fourth volume in 'The Sanctuary on Keros and Origins of Aegean Ritual Practice: the excavations of 2006-2008' series. It treats in detail the pottery from the settlement on the islet of Dhaskalio, whose excavation is described in Volume I of the series. Much of the importance of this material lies in the undisturbed stratigraphy of the settlement, a fact that allowed for the recognition of three successive phases of occupation of the site with considerable ceramic continuity between them, as well as for safe inferences about its chronology, with wider implications for the later early bronze age of the Cyclades. Other important aspects of this pottery are its considerable regionalism and the fact that it is almost in its entirety imported. The study of the pottery and other finds from the site suggest that the settlement at Dhaskalio may have operated primarily as a place for periodic rather than permanent habitation and that its function was most probably connected with the rituals practised at the opposite Special Deposits at Kavos. The character of Deposits at Kavos seem to have declined, and the site may increasingly have grown to be a centre of commercial exchange with other islands and areas.

Twice-crossed river

edited by Christopher Evans with Jonathan Tabor & Marc Vander Linden

Hardback | £40/US\$58 | ISBN-978-1-902937-75-5 | xxiii+639 pp. | 301 figs | 178 tables | 2016 |



This is the first volume charting the CAU's on-going Barleycroft Farm/Over investigations, which now encompasses almost twenty years of fieldwork across both banks of the River Great Ouse at its junction with the Fen. Amongst the project's main directives is the status of a major river in prehistory – when a communication corridor and when a divide? Accordingly, a key component throughout has been the documentation of the lower Ouse's complex palaeoenvironmental history, and a delta-like wet landscape dotted with mid-stream islands has been mapped. This book is specifically concerned with the length of The Over Narrows, whose naming alludes to an extraordinary series of mid-channel 'river race' ridges. With their excavation generating vast artefact sets and unique palaeo-economic data, these ridges saw intense settlement sequences, ranging from Mesolithic camps, Grooved Ware, Beaker and Collared Urn pit clusters (plus field plots) to Middle Bronze fieldsystems and their attendant settlements, a massive Late Bronze Age midden complex and, finally, an Iron Age shrine. The latter involved extensive human bone or body-part deposition and bird sacrifice. Four upstanding turf barrows and two accompanying waterlogged pond barrows feature among the main excavations reported here. With more than 40 cremations (including in situ pyres), the resultant detailing of Early Bronze Age mortuary practices and the insights into the period's monument construction are ground-breaking. This is an important book, for the scale of The Narrows' excavations and palaeoenvironmental studies, its comprehensive dating programmes and, particularly, the innovative methodologies and analyses undertaken. Indeed, a commitment to experiment has lain at the project's core.

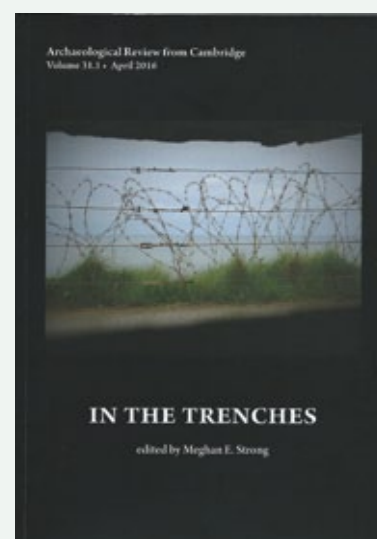
Archaeological Review from Cambridge

GENERAL EDITORS 2015–16: BEN HINSON, BARBORA JANULÍKOVÁ, MEGHAN STRONG

ARC has enjoyed another successful year, with the release of two new issues which promote the depth and breadth of research among graduate students, within and beyond the department. The biannual journal is run on a non-profit voluntary basis by a committee of graduate research students in the Division of Archaeology. This year, ARC produced two successful issues, 'Archaeology: Myths Within and Without' (30.2) and 'In the Trenches' (31.1). 'Archaeology: Myths, Within and Without', edited by Ben Hinson and Barbora Janulikova, offered discussions on the role of myths and mythology in archaeology, not only relating to how we incorporate myth into interpretations of the archaeological record, but also how myths develop within the discipline of archaeology. 'In the Trenches', edited by Meghan Strong, explored the relationship between archaeology and conflict, both as subject area, but also how conflict can act as a driving force behind archaeological investigations.

ARC looks forward to the release of our next two issues in 2016/2017. Our November 2016 issue (31.2) 'Landscapes & People', edited by Ian Ostericher, aims to marry theoretical and methodological approaches to the study of archaeological landscapes. In April 2017, 'In Sickness and in Health: Interdisciplinary approaches to the study of disease and deformity in past populations' (32.1), edited by Lynette Talbot and Eóin Parkinson, seeks to facilitate interdisciplinary dialogue between scholars who use artefactual, textual and skeletal evidence in the study of health and disease in past populations. We look forward to a new academic year, where we will welcome new members to the ARC committee. For more information about ARC, please visit:

<http://www.societies.cam.ac.uk/arc/home.html>



Members'/Fellows' Publications

MARTIN ALLEN

- 2015 Currency depreciation and debasement in medieval Europe, in *Money in the Western Legal Tradition*, eds. W. Ernst & D. Fox. Oxford: Oxford University Press, 41–52.
- 2015 England, Wales and Scotland: Medieval, in *A Survey of Numismatic Research 2008–2013*, eds. H. Emmerig & L. Travaini. (Special Publication 16.) Taormina: International Association of Professional Numismatists, 402–13.
- 2015 Estimates of the size of the Paxs type of William I/II (1087–c.1090?). *Numismatic Chronicle* 175, 205–10.
- 2015 (with G. Oddie). Revised estimates of the English silver currency, 1282–1351. *British Numismatic Journal* 85, 239–57.
- 2015 (with N.M.McQ. Holmes). A new type of Alexander III farthing. *British Numismatic Journal* 85, 276–7.
- 2015 (with R. Abdy & J. Naylor). Coin hoards from the British Isles 2015. *British Numismatic Journal* 85, 292–301.
- 2015 (with V. Drost, S. Moorhead & J. Naylor). Coin register 2015. *British Numismatic Journal* 85, 302–18.
- 2016 (ed. with M. Davies). *Medieval Merchants and Money. Essays in honour of James L. Bolton*. London: Institute of Historical Research.

GRAEME BARKER

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- 2015 (with L. Colominas, C.J. Edwards, A. Beja-Pereira, J.-D. Vigne, R.M. Silva, P. Castanyer, J. Tremolada, M.S. Seguí, M. Pérez-Ripoll, F. Goyache, C.J. Howe & M. Bower). Detecting the T1 cattle haplogroup in the Iberian Peninsula from Neolithic to Medieval times: new clues to continuous cattle migration through time. *Journal of Archaeological Science* 59, 110–17.
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- 2016 (with T. Reynolds, W. Boismer, L. Farr, C. Hunt & D. Abdulmutalib). New investigations at Shanidar Cave, Iraqi Kurdistan, in *The Archaeology of the Kurdistan Region of Iraq and Adjacent Regions*, eds. K. Kopanias & J. MacGinnis. Oxford: Archaeopress, 369–72.
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O'Donnell). The cultured rainforests of Borneo. *Quaternary International*. DOI: 10.1016/j.quaint.2016.08.018

- 2016 (with M. Lin & P. Miracle). A new method of identifying the exploitation of cattle labour from fragmentary metapodials. *Journal of Archaeological Science* 66, 44–56.
- 2016 (with G. Lucarini, A. Radini & H. Barton). The exploitation of wild plants in Neolithic North Africa: use wear and residue analysis of non-knapped stone tools from the Haua Fteah cave, Cyrenaica. *Quaternary International* 410, 77–92.
- 2016 (with A.L. Prendergast, R.E. Stevens, T.C. O'Connell, A. Fadlalaq, M. Touati, A. Al Muzeni, B.R. Schöne & C. Hunt). Changing patterns of eastern Mediterranean shellfish exploitation in the Late Glacial and Early Holocene: oxygen isotope evidence from gastropods in Epipalaeolithic to Neolithic human occupation layers at the Haua Fteah, Libya. *Quaternary International* 407, 80–93.
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JAMES BARRETT

- 2015 (ed. with S.J. Gibbon). *Maritime Societies of the Viking and Medieval World*. Leeds: Maney/Society for Medieval Archaeology.
- 2016 (ed. with D.C. Orton). *Cod and Herring: The archaeology and history of medieval sea fishing*. Oxford: Oxbow Books.

MARJOLEIN BOSCH

- 2015 (with W. Antl). The use of ivory at the Gravettian site Grub/Kranawetberg, Lower Austria. *Anthropologie* 53(1–2), 233–44.
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JANINE BOURRIAU

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JUDITH BUNBURY

- 2016 Geology of the Valley of the Kings, in *Oxford Handbook of the Valley of the Kings*, eds. R. Wilkinson & K. Weeks. Oxford: Oxford University Press.



- 2016 (with N. Hovius & B.T. Pennington). Emergence of civilization, changes in fluvio-deltaic style, and nutrient redistribution forced by Holocene sea-level rise. *Geoarchaeology* 31(3), 194–210.
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- 2015 'Have you been offended?' Holocaust memory in the Channel Islands at HMD 70. *Holocaust Studies: A Journal of Culture and History* 22(1), 44–64.
- 2015 The hidden heritage of forced and slave labour: examining the commitment to remembering in the Channel Islands. *Skifter* [Transactions] 4, The Royal Norwegian Society of Sciences and Letters. (Special issue: *Painful Heritage: Studies in the cultural landscape of the Second World War*, eds. M. Jasinski & L. Sem.),
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- CRAIG CESSFORD**
- 2015 The St. John's Hospital cemetery and environs, Cambridge: contextualising the medieval urban dead. *Archaeological Journal* 172, 52–120.
- 2015 Howes: a hunting-related medieval hamlet near Cambridge? *Medieval Archaeology* 59, 319–22.
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- JOANNE CUTLER**
- 2015 Minoanization, in *The Encyclopedia of Ancient History* 1, eds. R.S. Bagnall, K. Brodersen, C.B. Champion, A. Erskine & S.R. Huebner. (Wiley Online Library.) Chichester: John Wiley & Sons.
- 2015 (with E. Andersson Strand, M.-L. Nosch & collaborators for individual sites). Textile tools in contexts, in *Tools, Textiles and Contexts. Investigating textile production in the Aegean and eastern Mediterranean Bronze Age*, eds. E. Andersson Strand & M.-L. Nosch. (Ancient Textiles Series 21.) Oxford: Oxbow Books.
- 2016 Interlacing threads of evidence in the interpretation of textile production in Bronze Age Crete, in *Traditional Textile Craft – an Intangible Cultural Heritage?*, eds. C. Ebert, M. Harlow, E. Andersson Strand & L. Bjerregaard. (e-book), 102–13. <http://www.traditionaltextilecraft.dk/386325174>
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- 2016 (ed.) *The Archaeology of Coalition and Consensus*. Themed issue. *World Archaeology* 48(1).
- CHRISTOPHER EVANS**
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- LUCY FARR**
- 2015 (with E.A. Hill, C.O. Hunt, G. Lucarini, G. Mutri & G. Barker). Land gastropod piercing during the Late Pleistocene and Early Holocene in the Hava Fteah, Libya. *Journal of Archaeological Science: Reports* 4, 320–25.
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- CHARLES FRENCH**
- 2015 *A Handbook of Geoarchaeological Approaches to Investigating Landscapes and Settlement Sites*. Oxford: Oxbow Books.
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- 2016 The micromorphological analysis of soils and site contexts at Stonehall and Crossicrown, in *The Development of Neolithic House societies in Orkney: Investigations in the Bay of Firth, Mainland, Orkney (1994–2014)*, eds. C. Richards & R. Jones. Oxford: Windgather Press/Oxbow Books, 527–42.
- 2016 Grappling with interpreting and testing people-landscape dynamics, in *Handbook of Historical Ecology and Applied Archaeology*, eds. C. Isendahl & D. Stump. (Oxford Handbooks Online.) Oxford: Oxford University Press. DOI: 10.1093/oxfordhb/9780199672691.013.29



Members'/Fellows' Publications (cont.)

CHARLES FRENCH (cont)

- 2016 (with K. Lane, O.H. Oros, B. Whitlock, L. Coll & D. Beresford-Jones). Anatomia de un abandono El Caso de Viejo Sangayaico (SAN1), Huancavelica. *Inka Llaqta* 4(4), 1–15.
- 2016 (with K. Lane, O. Huamán Oros, B. Whitlock, L. Coll & D. Beresford-Jones). Ritual y abandono en la cuenca alta del río Ica. 153 El caso de Viejo Sangayaico (SAN 1), in *ACTAS, I Congreso Nacional de Arqueología* Vol. II. Lima: Ministry of Culture, 153–63.
- 2016 (with H. Lee). Detecting long-term valley fill evolution and exploration on the land-use of rice paddy: a geoaerchaeological investigation of the Baeksuk valley and its complex Bronze Age settlement. *Catena* 142, 190–205.
- 2016 (with W.P. Nanavati, K. Lane, O. Huamán Oros & D. Beresford-Jones). Testing Pachamama's fertility: soil dynamics and Prehispanic terraces in south-central highland Peru. *Catena* 142, 139–52.
- 2016 (with Y. Zhuang & W. Bao). Loess and early land use: Geoaerchaeological investigation at the early Neolithic site of Guobei, Southern Chinese Loess Plateau. *Catena* 144, 151–62.

DAVID FRIESEM

- 2015 (with M.C. Forget, L. Regev & R. Shahack-Gross). Physical and mineralogical properties of experimentally heated chaff-tempered mud bricks: implications for reconstruction of environmental factors influencing the appearance of mud bricks in archaeological conflagration events. *Journal of Archaeological Science: Reports* 2, 80–93.
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- 2016 (with N. Lavi). Foragers, tropical forests and the formation of archaeological evidences: an ethnoarchaeological view from South India. *Quaternary International*. DOI:10.1016/j.quaint.2016.06.036
- 2016 (with Y. Zaidner, A. Frumkin, A. Tsatskin & R. Shahack-Gross). Landscapes, depositional environments and human occupation at Middle Paleolithic open-air sites in the southern Levant, with new insights from Neshar Ramla, Israel. *Quaternary Science Reviews* 138, 76–86.

MARGARITA GLEBA

- 2015 Etruscan textiles in context, in *Companion to the Etruscans*, eds. A. Carpino & S. Bell. Chichester: Wiley-Blackwell, 237–46.
- 2015 Sacred cloth: consumption and production of textiles in sanctuaries and the power of elites in archaic western Mediterranean world, in *Sanctuaries and the Power of Consumption. Networking and the formation of elites in the archaic western Mediterranean world. Proceedings of the*

International Conference in Innsbruck, 20–23 March 2012, eds. E. Kistler, B. Öhlinger, M.

Mohr & M. Hoernes. Wiesbaden: Harrassowitz, 373–83.

- 2015 (with R. Laurito). Appendice 1. Analisi delle tracce di tessuti rinvenuti a Grotte di Castro in località Vigna la Piazza, in E. Pellegrini, Un aspetto delle necropoli etrusche di Grotte di Castro: le tombe a fossa con circolo di Vigna La Piazza. *Annali Faina* 20, 337–9, 346, figs. 1–4.
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- 2016 Women and textile production in pre-Roman Italy, in *Women in Antiquity*, eds. S.L. Budin & J. MacIntosh Turfa. London/New York: Routledge, 844–51.
- 2016 Analisi preliminare dei tessuti della Tomba dell'Aryballos sospeso, in A. Mandolesi *et al.*, Tomba dell'aryballos sospeso. *Orizzonti – Rassegna di Archeologia* 17, 28–32.
- 2016 (with I. Vanden Berge & M. Aldenderfer). Textile technology in Nepal in the 5th–7th centuries CE: the case of Samdzong. *STAR: Science and Technology in Archaeological Research* 2(1). DOI:10.1080/20548923.2015.1110421

NORMAN HAMMOND

- 2015 Maya: revelation and re-evaluation (review-article discussing eight books on the Maya). *Antiquity* 89, 1503–10.
- 2015 (with J.L. Wilson). Memorials to Fellows: John Harley FSA. *SALON* 353, 26–8.
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- 2016 The big sleep: early Maya mortuary practice, in *Death Rituals, Social Order and the Archaeology of Immortality in the Ancient World*, eds. C. Renfrew, M.J. Boyd & I. Morley. Cambridge: Cambridge University Press, 237–54.
- 2016 (with A. Runggaldier). Maya states: the theoretical background in historical overview, in *The Origins of Maya States*, eds. L. Traxler & R.J. Sharer. Philadelphia (PA): University of Pennsylvania Museum of Archaeology & Anthropology, 33–57.
- 2016 (with C. Luke). An Uluu marble vase from Moho Cay, Belize. *Mexicon* 38, 3–5.
- 2016 Book review: *Ancient Teotihuacan: Early Urbanism in Central Mexico*, by G. L. Cowgill. Cambridge: Cambridge University Press, 2015. *Antiquity* 90, 828–30.
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EMMANUELLE HONORÉ

- 2015 Pastoralists' paintings of WG35, Gilf el-Kebir: anchoring a moving herd in space and time,

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- 2016 (with T. Rakza, B. Senut, P. Deruelle & E. Pouydebat). Hand measurement data from human babies at birth, from 26 to 41 weeks estimated gestational age. *Data in Brief* 7, 1451–4.
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SACHA JONES

- 2015 Human vulnerability in a Middle Palaeolithic context: Response of hunter-gatherers in India to the c. 74 ka Toba supervolcanic eruption, in *Volcanic Eruptions and Human Vulnerability in Traditional Societies Past and Present*, ed. F. Riede. Aarhus: Aarhus University Press, 257–78.
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- 2016 Middle Stone Age reduction strategies at the desert's edge: a multi-site comparison across the Gebel Akhdar of northeast Libya. *Quaternary International* 408, 53–78.

BARRY KEMP

- 2014/2015 The 'pyramid' at Zawiyet Sultan (Zawiyet el-Meitin). *Mitteilungen des Deutschen Archäologischen Instituts Abteilung Kairo* 70/71, 239–46.
- 2015 (ed.). Tell el-Amarna, 2014–15. *Journal of Egyptian Archaeology* 101, 1–35.
- 2015 *Ancient Egypt: All that matters*. London: John Murray Learning.

TOOMAS KIVISILD

- 2015 (with C.A. Eichstaedt, T. Antao, A. Cardona, L. Pagani & M. Mormina). Positive selection of AS3MT to arsenic water in Andean populations. *Mutation Research* 780, 97–102.
- 2016 (with S. Mallick, H. Li, M. Lipson, I. Mathieson, M. Gymrek, F. Racimo, M. Zhao, N. Chennagiri, S. Nordenfelt, A. Tandon, P. Skoglund I. Lazaridis, S. Sankararaman, Q. Fu, N. Rohland, G. Renaud, Y. Erlich, T. Willems, C. Gallo, J.P. Spence, Y.S. Song, G. Poletti, F. Balloux, G. van Driem, P. de Knijff, I.G. Romero, A.R. Jha, D.M. Behar, C.M. Bravi, C. Capelli, T. Hervig, A. Moreno-Estrada, O.L. Posukh, E. Balanovska, O. Balanovsky, S. Karachanak-Yankova, H. Sahakyan, D. Toncheva, L. Yepiskoposyan, C. Tyler-Smith, Y. Xue, M.S. Abdullah, A. Ruiz-Linares, C.M. Beall, A. Di Rienzo, C. Jeong, E.B. Starikovskaya, E. Metspalu, J. Parik, R. Villems, B.M. Henn, U. Hodoglugil, R. Mahley, A. Sajantila, G. Stamatoyannopoulos, J.T. Wee, R. Khusainova, E. Khusnutdinova, S. Litvinov, G. Ayodo, D. Comas, M.F. Hammer, W. Klitz, C.A. Winkler, D. Labuda, M. Bamshad, L.B. Jorde, S.A. Tishkoff, W.S. Watkins, M. Metspalu, S. Dryomov, R. Sukernik, L. Singh, K. Thangaraj, S. Pääbo, J. Kelso, N. Patterson & D. Reich.



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- 2016 (with L. Pagani, D.J. Lawson, E. Jagoda, A. Mörseburg, A. Eriksson, M. Mitt, F. Clemente, G. Hudjashov, M. DeGiorgio, L. Saag, J.D. Wall, A. Cardona, R. Mägi, M.A. Sayres, S. Kaewert, C. Inchley, C.L. Scheib, M. Järve, M. Karmin, G.S. Jacobs, T. Antao, F.M. Iliescu, A. Kushniarevich, Q. Ayub, C. Tyler-Smith, Y. Xue, B. Yunusbayev, K. Tambets, C.B. Mallick, L. Saag, E. Pocheshkhova, G. Andriadze, C. Muller, M.C. Westaway, D.M. Lambert, G. Zoraqi, S. Turdikulova, D. Dalimova, Z. Sabitov, G.N. Sultana, J. Lachance, S. Tishkoff, K. Momynaliev, J. Isakova, L.D. Damba, M. Gubina, P. Nymadawa, I. Evseeva, L. Atramentova, O. Utevska, F.X. Ricaut, N. Brucato, H. Sudoyo, T. Letellier, M.P. Cox, N.A. Barashkov, V. Škaro, L. Mulahasanovic, D. Primorac, H. Sahakyan, M. Mormina, C.A. Eichstaedt, D.V. Lichman, S. Abdullah, G. Chaubey, J.T. Wee, E. Mihailov, A. Karunas, S. Litvinov, R. Khusainova, N. Ekomasova, V. Akhmetova, I. Khidiyatova, D. Marjanović, L. Yepiskoposyan, D.M. Behar, E. Balanovska, A. Metspalu, M. Derenko, B. Malyarchuk, M. Voevoda, S.A. Fedorova, L.P. Osipova, M.M. Lahr, P. Gerbault, M. Leavesley, A.B. Migliano, M. Petraglia, O. Balanovsky, E.K. Khusnutdinova, E. Metspalu, M.G. Thomas, A. Manica, R. Nielsen, R. Villems, E. Willerslev & M. Metspalu). Genomic analyses inform on migration events during the peopling of Eurasia. *Nature*. DOI:10.1038/nature19792
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- 2016 (with A.M. Ilumäe, M. Reidla, M. Chukhryaeva, M. Järve, H. Post, M. Karmin, L. Saag, A. Agdzhoyan, A. Kushniarevich, S. Litvinov, N. Ekomasova, K. Tambets, E. Metspalu, R. Khusainova, B. Yunusbayev, E.K. Khusnutdinova, L.P. Osipova, S. Fedorova, O. Utevska, S. Koshel, E. Balanovska, D.M. Behar, O. Balanovsky, P.A. Underhill, R. Villems & S. Roots). Human Y chromosome haplogroup N: a non-trivial time-resolved phylogeography that cuts across language families. *American Journal of Human Genetics* (7 July) 99(1), 163–73.
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- 2016 (with A. Mörseburg, L. Pagani, F.X. Ricaut, B. Yngvadottir, E. Harney, C. Castillo, T. Hoogervorst, T. Antao, P. Kusuma, N. Brucato, A. Cardona, D. Pierron, T. Letellier, J. Wee, S. Abdullah & M. Metspalu). Multi-layered population structure in Island Southeast Asians. *European Journal of Human Genetics*. DOI:10.1038/ejhg.2016.60
- SHEILA KOHRING**
- 2015 (with J. Stargardt, G. Amable, S. Taylor, S. Fallon, W. Kyaing, T.M. Oo, T.T. Htay, K.M. Oo, N.N.Y. Mauk, N.P. Wah & W. Sein). Early urban archaeology in southeast Asia: the first evidence for a Pyu habitation site in Sri Ksetra, Myanmar. *Antiquity* 89(348). <http://antiquity.ac.uk/projgall/stargardt348>
- 2016 A case for the one-offs: improvisation and innovation within a Copper Age potting community. *Cambridge Archaeological Journal* 26(3), 513–26.
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- 2015 (with R. Ballantyne, G.R. Bellini, N. Leone & M.J. Millett). Interamna Lirenas (Research Report 2014). *Papers of the British School at Rome* 83, 299–302.
- 2016 Finley and the ancient economy, in *M.I. Finley: An ancient historian and his impact*, eds. D. Jew, R. Osborne & M. Scott. Cambridge: Cambridge University Press, 227–49.
- 2016 The economic impact of Flavian rule, in *A Companion to the Flavian Age of Imperial Rome*, ed. A. Zissos. Chichester: John Wiley & Sons, 189–206.
- 2016 (with M. Maiuro). Forme dell'economia rurale, in *L'Italia dei Flavi: Atti del Convegno, 4–5 ottobre 2012, Roma*, eds. L. Capogrossi Colognesi, E. Lo Cascio & E. Tassi Scandone. Rome: L'Erma di Bretschneider, 121–52.
- ALICE LEPLONGEON**
- 2016 Middle Stone Age and early Late Stone Age lithic assemblages at Enkapune Ya Muto (Kenya). *Proceedings of the European Society for the Study of Human Evolution* 5, 141.
- 2016 (with E. Huysecom, B. Chevrier, A. Mayor, T. Pelmoine, N. Canti, L. Chaix, L. Lespez, S. Loukou, M. Rasse, M. Truffa Giachet, H. Bocoum, A. Camara, I. Hajdas, B. Lebrun & C. Tribolo). *Transitions et continuités dans la vallée de la Falémé (Sénégal): résultats de la 18ème année de recherche du programme international 'Peuplement humain et paléoenvironnement en Afrique'* (SLSA Jahresbericht 2015). Zürich/Vaduz: Fondation Suisse-Liechtenstein pour les recherches archéologiques à l'étranger.
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- EMMA LIGHTFOOT**
- 2016 (with X. Liu, R. Reid, G. Motuzaite Matuzeviciute & M.K. Jones). Radical change and dietary conservatism: mixing model estimates of human diets along the Inner Asia and China's Mountain Corridors. *The Holocene* 26, 1556–65.
- 2016 (with M. Naum, V. Kadakas & E. Russow). The influence of social status and ethnicity on diet in Mediaeval Tallinn as seen through stable isotope analysis. *Estonian Journal of Archaeology* 20, 81–107.
- 2016 (with T.C. O'Connell). On the use of biomineral oxygen isotope data to identify human migrants in the archaeological record: sample variation, statistical methods and geographical considerations. *PLoS ONE* 11(4): e0153850.
- 2016 (with N. Przelomska, M. Craven, T.C. O'Connell, L. He, H.V. Hunt & M.K. Jones). Intraspecific carbon and nitrogen isotopic variability in foxtail millet (*Setaria italica*). *Rapid Communications in Mass Spectrometry* 30, 1475–87.
- 2016 (with J. Santana, R. Fregel, J. Morales, M. Alamón, J. Guillén, M. Moreno & A. Rodríguez). The early colonial Atlantic world: new insights on the African Diaspora from isotopic and ancient DNA analyses of a multi-ethnic 15th–17th-century slave burial population from the Canary Islands, Spain. *American Journal of Physical Anthropology* 159, 300–312.
- MARTIN MILLETT**
- 2015 (with R. Gowland). Infant and child burial rites in Roman Britain: a study from East Yorkshire. *Britannia* 46, 171–89.
- 2016 (with R. Ferraby). *Aldborough Roman Town*. London: English Heritage Guidebooks.
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- 2016 (with S. Keay). Republican and early Imperial Towns in the Tiber Valley, in *A Companion to Roman Italy*, ed. A.E. Cooley. Oxford: Blackwell-Wiley, 357–77.
- 2016 (with S.H. Willis). South Gaulish Samian Ware, in *Cartimandua's Capital: The late Iron Age royal site at Stanwick, North Yorks, fieldwork and analysis 1981–2011*, ed. C.C. Haselgrove. (CBA Research Report 175.) York: Council for British Archaeology, 237–44.
- PRESTON MIRACLE**
- 2015 (with S.E. Pilaar Birch). Subsistence continuity, change, and environmental adaptation at the site of Nugaljanska, Istria, Croatia. *Environmental Archaeology* 20, 30–40.
- 2016 (with M. Lin & G. Barker). Towards the identification of the exploitation of cattle labour from distal metapodials. *Journal of Archaeological Science* 66, 44–56.
- 2016 (with S.E. Pilaar Birch, R.E. Stevens & T.C. O'Connell). Late Pleistocene/early Holocene migratory behavior of ungulates using isotopic analysis of tooth enamel and its effects on forager mobility. *PLoS ONE* 11(6): e0155714. DOI:10.1371/journal.pone.0155714



Members'/Fellows' Publications (cont.)

PIERS MITCHELL

2016 Human parasites in the Roman world: health consequences of conquering an empire. *Parasitology*. DOI: 10.1017/S0031182015001651

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2016 (with H.-Y. Yeh). Intestinal parasites in the 15th Century cesspool at del Pilar, in the Christian Quarter of Jerusalem, in *Colegio de Pilar: Excavations in Jerusalem, Christian Quarter*, eds. C. Clamer, K. Prag & J.-B. Humbert. (Cahiers de la Revue Biblique.) Leuven: Peeters, 154–61.

2016 (with H.-Y. Yeh & Y.-P. Chen). Human intestinal parasites from the Wushantou site in Neolithic Taiwan (800–0 BC). *Journal of Island and Coastal Archaeology*. DOI: 10.1080/15564894.2016.1218394

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LUC MOREAU

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2016 (with M. Brandl, P. Filzmoser, Chr. Hauzenberger, É. Goemaere, I. Jadin, H. Collet, A. Hauzeur & R. Schmitz). Geochemical sourcing of flint artefacts from western Belgium and the German Rhineland: testing hypotheses on Gravettian period mobility and raw material economy. *Geoarchaeology* 31, 229–43.

RUNE NYORD

2015 (ed. with K. Ryholt). *Lotus and Laurel: Studies in Egyptian Language and Religion in Honour of Paul John Frandsen*. (CNI Publications 39.) Copenhagen: Museum Tusulanum Press.

2016 Øjeblikket og flodhesten: Om oldægyptiske tidsoptattelser [The moment and the hippo: on ancient Egyptian conceptions of time]. *Papyrus: Ægyptologisk Tidsskrift* 36(1), 20–27.

2016 The Life and Legacy of Wallis Budge. *Pieces: Christ's College Newsletter* 31, 14.

2016 Book review: *Unwrapping Ancient Egypt*, by C. Riggs. London: Bloomsbury, 2014. *Cambridge Archaeological Journal*. DOI:10.1017/S0959774316000305

TAMSIN O'CONNELL

2016 (with S. Charlton, M. Alexander, M. Collins, N. Milner, P. Mellars, R.E. Stevens & O.E. Craig). Finding Britain's last hunter-gatherers: a new biomolecular approach to 'unidentifiable' bone fragments utilising bone collagen. *Journal of Archaeological Science* 73, 55–61.

2016 (with R.E.M. Hedges). Chicken and egg: testing the carbon isotopic effects of carnivory and herbivory. *Archaeometry*. DOI: 10.1111/arcm12253

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2016 (with C.A. Phillips). Fecal carbon and nitrogen isotopic analysis as an indicator of diet in Kanyawara chimpanzees, Kibale National Park, Uganda. *American Journal of Physical Anthropology*. DOI: 10.1002/ajpa.23073

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2016 (with H. Reade, R.E. Stevens & G. Barker). Pleistocene and Holocene herbivore diets and palaeoenvironments in the Gebel Akhdar (Libya): implications for past human populations. *Paleogeography, Paleoclimatology, Paleoecology* 449, 62–78.

2016 (with R.E. Stevens). Red deer bone and antler collagen are not isotopically equivalent in carbon and nitrogen. *Rapid Communications in Mass Spectrometry* 30, 1969–84.

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SUSAN OOSTHUIZEN

2015 (ed. with F. Willmoth). *The Ely Coucher Book, 1249–50. The Bishop of Ely's Manors in the Cambridgeshire Fenland*. Cambridge: Cambridgeshire Records Society.

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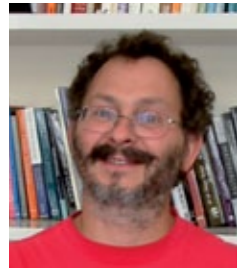
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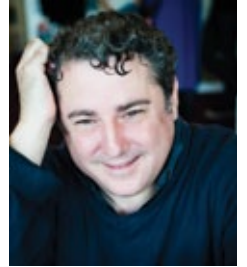
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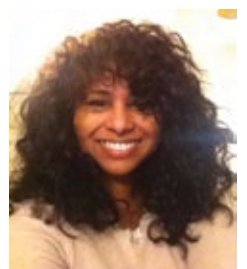
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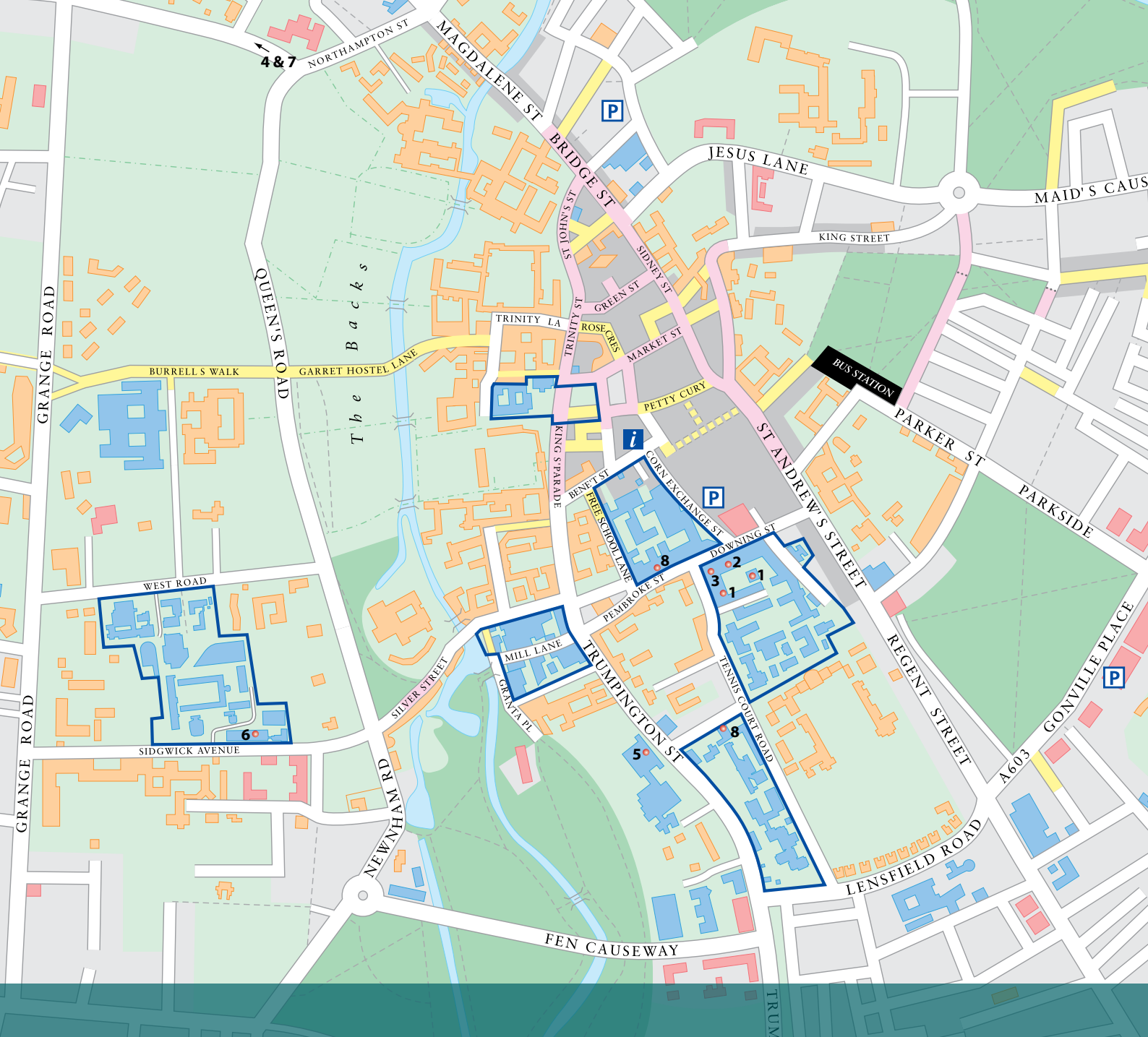
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