

## Archaeology at Cambridge

2020-2022







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#### Introduction: The McDonald Institute and Archaeology at Cambridge

TAMSIN O'CONNELL & MATTHEW DAVIES

Dear colleagues and friends,

It is with great honour that we write to you to report on our activities over the period 2020-22. This period was not an easy one. The 2019-20 Annual Report noted that the year had been bisected by the COVID pandemic and this report covers much of the following period. It seems appropriate therefore to begin with a word to all those who were affected by this tragedy and to thank everyone who worked so hard to bring us through those dark times. The Department and McDonald were steered through the global crisis wonderfully well by Professor Broodbank and our dedicated teams of academic and professional staff. The resilience, hard work and good cheer shown by all during this exceptional time should be rightly praised. For both of us it has been a blessing to take up our roles towards the end of the pandemic and at an opportune moment where we hope our new energies may make the most of the exceptional foundation we have inherited.

Like so much over the last few years, this report has been disrupted and delayed. Much of that delay of course stems from the obvious, but it also in part stems from the strength of our recovery. We have been so busy focusing on exciting new initiatives and successes that this report was somewhat marginalised. We hope that you will forgive this tardiness when you read of the positive ways in which we have bounced back. To catch up, we report here on two academic years, 2020-21 and 2021-22. Even at the darkest moments of COVID there are impressive tales of research and educational success to highlight, while from early 2022 activities in the Department and at the Institute have gathered pace towards new heights.

A notable place to begin is with the international esteem in which the Department is held. In spring 2021 it was announced that we had skipped ahead of an old rival to top the QS world rankings in Archaeology. This success was further reflected in our excellent performance in the 2022 Research Excellence Framework which will be reported on in detail in the next Annual Report. Several major research grant awards during this period underline the brilliant research undertaken by our people including ANCESTORS (John Robb and team), NGIPALAJEM (Marta Mirazón Lahr, Rob Foley and team) and REVERSEACTION (Marcos Martinón-Torres and team), each of which is reported on in detail

in what follows. Despite the pandemic, ongoing major projects such as ENCOUNTER (Enrico Crema and team), MOBILE (Guy Jacobs and team), Yangshao (Marie Louise Stig Sørensen and team), TwoRains (Cameron Petrie and team), Safeguarding Holocaust Sites (Gilly Carr) and Beasts2Crafts (Matthew Collins and team) continued at pace. Reconstruction of the Shanidar Neanderthal crania (Emma Pomeroy, Graeme Barker and team) was a notable research highlight attracting exciting media attention. As noted in the 2019–20 report and presented in detail in what follows, two major heritage projects funded by ARCADIA have gone from strength to strength. Both the Mapping Archaeological Heritage in South Asia (MAHSA, Cameron Petrie, Rebecca Roberts and team) and Mapping Africa's Endangered Archaeological Sites and Monuments (MAEASaM, Paul Lane, Stefania Merlo and team) have developed in scope and ambition and demonstrate the breadth and depth of our international collaborations and the potential for Cambridge archaeology to make major contributions to international heritage infrastructures.

This success was mirrored in late 2020 with a landmark £3 million AHRC award under the World Class Labs Funding Scheme for the Cambridge Heritage Science Hub (CHERISH) led by the Department of Archaeology and McDonald Institute (with the Fitzwilliam Museum, Hamilton Kerr Institute, University Library and Museum of Archaeology and Anthropology). CHERISH supported major refurbishments and equipment purchases across the estate and was one of the largest Arts and Humanities grant awards yet made. The award further signals the success of our broad contributions to the field of Heritage Studies as spearheaded by the Cambridge Heritage Research Centre led by Dacia Viejo Rose, which not only supports a multitude of important Early Career and established long-term research initiatives, but which also serves to focus critical debates concerning the nature, value and ownership of heritage globally.

A powerful reflection of the CHERISH project and another major highlight of the period was the 'Gold of the Great Steppe' exhibition at the Fitzwilliam Museum, curated by McDonald Institute Fellow Rebecca Roberts and drawing on original scientific analyses by Departmental PhD candidate Saltanat Amirova (see cover image). Led by Jody Joy and newly appointed Jimena Lobo Guerrero Arenas,



colleagues at the MAA have similarly continued to play a major role in our community including many collaborative research and educational engagements. Particularly notable has been the major Stores Move project spearheaded by MAA staff with associated Departmental and Cambridge Archaeological Unit (CAU) initiatives. The Cambridge Archaeological Unit said farewell to its Founding Director Chris Evans, whose work has left an indelible imprint, and welcomed its new Executive Director Matt Brudenell. It continued its mission to blend developer-led archaeology with leading academic research, most notably across a range of quarry excavations, renewed work at Flag Fen, and in the post-excavation analysis and write-up of work on the Cambridge Biomedical Campus and at Must Farm. Highlights of three decades of CAU excellence were celebrated at its 30th anniversary at an impressive 'Two Worlds' conference.

The above can only provide a brief flavour of the vast range of research conducted across the Cambridge archaeological, heritage and biological anthropology community and we can only apologise here to all those whose work we have not had the chance to highlight. Our website and social media channels continue to celebrate a wealth of dynamic research so please do keep an eye on these. Important work conducted in the Faculty of Classics and at the Institute of Continuing Education is also reported here and underscores the breadth of our community within the University itself. Such wide diversity in our research is reflected in the scope of both external and internal McDonald Institute Grants and Awards made through the period, as reported on later in the volume.

The quality of our research is reflected in the prestigious awards and nominations colleagues have received. The TIGR<sup>2</sup>ESS (Transforming India's Green Revolution by Research and Empowerment for Sustainable Food Supplies) project, involving Martin Jones, Cameron Petrie and Adam Green, was given the Collaboration Award as part of the Vice-Chancellor's 2021 Awards for Research, Impact and Engagement. The award citation noted that the project was 'truly epic in scale and importance'. In 2021, the Aldborough Roman Town Project led by Martin Millet and Rose Ferraby was nominated for Current Archaeology project of the year, while CAU's Rob Wiseman was nominated for archaeologist of the year for his 'Archaeology on Furlough project'. In 2022, Charly French was awarded the British Academy Landscape Archaeology medal, a very well-deserved honour in recognition of his influential work over many decades. Matthew Collins received

the Pomerance Award for Scientific contributions to Archaeology from the Archaeological Institute of America. The Department of Archaeology itself was also successful in obtaining an Athena Swan Bronze Award, an important collective endeavour which we must continue to build upon.

Despite lockdown, in 2020 Professor Rob Foley delivered the 32nd McDonald Annual Lecture online, entitled the 'The Fourth Handshake: Selection, Diversity and Ecology in Human Evolutionary Studies'. The 2021 Annual Lecture was delayed in the hope that we might convene in person, and this patience was rewarded in early 2022 when Professor Alison Wylie was able to deliver our first hybrid Annual Lecture entitled 'Bearing Witness: Collaborative Archaeology in a Settler Colonial Context'. The Cambridge Heritage Centre's fourth and fifth annual lectures were given online by Professor Laurajane



Professor Alison Wylie (University of British Columbia) who delivered the 33rd McDonald Annual Lecture 'Bearing Witness: Collaborative Archaeology in a Settler Colonial Context' in May 2021.

Smith and Professor Rodney Harrison, respectively. Daniel Fuks organised a major conference on crop migrations in the first-millennium Middle East and Mediterranean which saw a return to major in-person events at the McDonald Institute. We were also delighted to host an in-person lecture by the distinguished US archaeologist and visiting Pitt Professor Theresa Singleton, on the topic of

LISON WYLLE

archaeological narratives of slavery. Throughout the period, our wide menu of specialist seminars gradually transitioned into hybrid forms, while the flagship Garrod Seminars showcased leading research and ideas on themes including Decolonising Archaeology, The North Atlantic Highway and Historical Ecologies.

At its heart, this community is driven by our dynamic academics and large body of Early Career Researchers. In 2022, this community was sadly diminished by the death of the towering figure of Sir Paul Mellars. Although formally outside the period of this report, it would be wrong not also to note here the death in early 2023 of the much-loved Dr Joan Oates and the devastating loss of Dr Lisa Lodwick in November 2022, who was sadly never able to take up her lectureship. In the Department we were also sad to see the departure of Preston Miracle, Augusta McMahon, Rob Foley, Philip Nigst, Martin Worthington, Rihlat Said Mohamed, Kathelijne Koops, Rachel Ballantyne, Joe Jeffrey, Mark Haughton, Adam Green, Adam Howe, Laura Van Holstein, Silvia Hogg, Fabio Lahr, James Walpole and Laure Bonner, each of whom made significant contributions to the Department and McDonald over their times here, long and short. We were delighted to welcome Amélie Beaudet, Guy Jacobs, Andreas Pantazatos, Jonathan Tenney, Alastair Key, Sylvain Lemoine, Carmen Ting, Marta Munoz Alegre, Christina Geisen and Jacobus Saers. At the McDonald Institute, we said goodbye to James Barrett, who left for a Professorship in Trondheim and who must be greatly thanked for his long and important service as Deputy Director. Carole Smith, whose tea and coffee had kept the Department and McDonald Institute refreshed for so long, sadly stepped down. Carole remains much missed, but we have been fortunate to reopen the McDonald coffee room under the auspices of Oznur Chapman and the space is once again teeming with intellectual fervour! The Department and McDonald Institute also saw the appointment of Beverley O'Dowd as receptionist, Imogen Badley into a new administrative role, and several new project administrators.

Despite the pandemic, we were still able to host some 17 Visiting Scholars and since the end of lockdown the number of visitors has increased at pace. Fortunately, we remain able



Carole Smith enjoying a strawberry tea with colleagues to say thank you for looking after us all during her long service at the Institute.

to offer this service free of charge and we believe that the opportunity for the best scholars globally to join us in Cambridge significantly adds to the intellectual and social vibrancy of our community. The pandemic also saw a large turn-over in the postdoctoral community, but by early 2022 our Fellows had returned to nearly 60 in number. A large number of these Fellows support the outstanding international projects noted above and are sadly too numerous to name here, though they are listed on the affiliation pages. We should note, however, our flagship Renfrew Fellows, Helen Alderson, Beatriz Marin Aguilera and Carmen Ting, and that we continued to enjoy success in national competitions with three Leverhulme Early Career Fellows (Emma Loftus, Monica Ramsey and Ashleigh Wiseman). We have also continued our considerable successes in supporting applications to international fellowships including six Marie Curie Fellows (Edgar Camarós, Ryan Espersen, Alfredo Cortell-Nicolai, Nicolas Nikis, Nik Petek-Sergeant and Julia Tejada Lara) and in hosting the Smuts Fellow (Tunde Babalola), two Newton International Fellows (Kingsley Daraojimba and Daniel Fuks), a Rothschild Fellow (Daniel Fuks), SNSF Fellow (Néhémie Strupler), Leventis Foundation (Federica Sulas), Pouroulis Foundation (Paloma de la Peña) and Carlsberg Fellow (Rune Rasmus Olsen). In our next Annual Report, we will also report more fully on the appointment of our first Black Heritage or Identity Fellow, Linda Mbeki. We are also delighted to continue to host fellows and members based in Classics, Zoology and several Colleges, including a significant number of outstanding college-based Junior Research Fellows. Our list of some 28 Senior

Fellows and 35 Honorary Research Associates continues to grow, reflecting an impressive network of world-leading international collaborations. This international excellence does not, however, overshadow the excellence of work in the UK. Support for professional UK archaeologists continued with both Chris Evans (CAU) and Virgil Yendell (MoLA) taking up positions as Field Archaeologist in Residence.

So where does all of this leave us? We have come

through a period of turmoil and yet our community and the quality and breadth of our work, and the esteem in which we are held both in the UK and internationally, seem not only to have recovered but to have grown. As the following pages show, archaeology in Cambridge is stronger and more vibrant than ever. If you are, have been, or aspire to be part of our community, then we hope that as you read this report you will find enjoyment and inspiration in equal measure.



A last 'on the McDonald steps' portrait for the Institute's Deputy Director, James Barrett, who served in the role from 2006 until 2021. His family, students and colleagues wish him good luck on his appointment at Trondheim University.

#### The Museum of Archaeology and Anthropology (MAA)

JIMENA LOBO GUERRERO ARENAS & JODY JOY

Despite lockdowns in 2020–21 and a slow return to normal activity in 2021–22, MAA continued to facilitate research, teaching and outreach activities. In October 2021, MAA appointed Dr Jimena Lobo Guerrero Arenas as the new Senior Curator in World Archaeology.

Jody Joy continued his research and work on the objects from the Cambridgeshire Archaeology collections as part of his Art Fund Headley Fellowship, working towards a major new exhibition that will open in 2023. A new display case was installed during December 2020 in the Clarke Gallery, focusing on the search for children in the archaeological record of the Cambridge region. More recently, Jimena Lobo Guerrero Arenas and Eleanor Wilkinson have resumed working on the redisplay of the Egyptian cases that was initiated by Helen Alderson in 2020.



Dr Marco Romeo-Pitone, from Newcastle University, visited MAA to undertake XRF analysis of the Burwell Hoard (MAA 1969.33-1969.44).

Despite the partial furloughing of both the Collections Manager and the Teaching and Collections Assistant, collections work continued across the archaeology section. Imogen Gunn and Eleanor Wilkinson updated 1444 object records with new analyses, dating, descriptions and photographs stemming from previous researcher visits and publications, and since October 2020 the Keyser has hosted 40 researchers over 73 days, consulting over 1000 objects.

The pandemic continued to have a restrictive effect on teaching time in the Keyser Workroom during the academic year 2020–21. In lieu of practicals in the workroom, Eleanor Wilkinson and Sheila Kohring hosted online practicals for the A1 undergraduates, while other lecturers took the opportunity to pre-record their practicals during Michaelmas 2020. Eleanor photographed and uploaded under-represented teaching collections to the database to increase the provision for lecturers and students. In October 2021, the Keyser welcomed back students for in-person practical handling classes. During this academic year, the Keyser hosted 41 taught classes which totalled 193 student visits and hosted 14 Open Sessions, totalling 30 student visits.



Maya casts from the Maudslay Collection mounted on their new A-frame at the Centre for Material Culture (CMC).

Despite pauses due to lockdowns, the Stores Move project continues to make excellent progress. All the Anglo Saxon and British Iron Age collections have been documented, photographed, repacked and safely moved to the new Centre for Material Culture (CMC), along with material from Iraq, Lesotho, the site of Jericho and the Maya casts from the Maudslay Collection. The updated records are available via our online collections' portal, where the photographs can be downloaded: https://collections.maa.cam.ac.uk

Finally, MAA added several important acquisitions to the collection, through both the Treasure Act and donation. They include a miniature Iron Age silver bow brooch (Pampisford, Cambs: 2020.14); an Early Medieval silver strap end (Shudy

Camps, Cambs: 2021.2); terminals of a silver snake-headed Roman bracelet (Wood Walton, Cambs: 2021.3 A-B); a small collection of beads, amulets and vessels collected by Horace Beck (Jonathan Shaw: 2022.4-20); lithics from Tippacott, Devon, and Swaffham Prior, Cambs (Andrew



Boxing Hares: Silver strap end, Early Medieval (2021.2).

David: 2022.21); a textile fragment from Peru and vessel from Colombia (transferred from Buxton Museum and Art Gallery: 2022.23-24) and an archaeological assemblage from Letter F Farm and Peacock's Farm (1983 and 1984) (Alasdair Whittle: 2022.25-29). Two acquisitions to the museum archives that may be of interest are two sets of undergraduate class notes from the archaeology tripos in the 1940s (donated by Pamela Jane Smith: Doc.499 and Doc.501) and field notes from Gloucester Street, Cambridge, and Burwell excavations (late 1960s/early 1970s) (donated by David M. Browne: Doc.500).

#### **Cambridge Archaeological Unit**

MATTHEW BRUDENELL

Delayed due to the pandemic, the Unit's 30th anniversary celebrations were finally marked in April 2022 by the 'Two Worlds' conference hosted by the CAU and McDonald Institute. Attended by staff and friends of the Unit, both past and present, this provided a timely opportunity to reflect on the CAU's wide-ranging contribution to archaeology over the past three decades and to celebrate, in particular, the extraordinary achievements of the founding Director Christopher Evans, who retired at the end of September 2021.

The past year has also been one of the busiest for the Unit, especially in the field. Our long-standing quarry projects at Broom (Beds), West Deeping (Lincs), Mitchell Hill and Over (Cambs) have continued apace, unravelling further details of long-term landscape occupancy. Highlights have included the excavation of major Iron Age and Roman settlement complexes at West Deeping and the discovery of four Neolithic long enclosures amidst a swathe of Early and Middle Bronze Age settlement remains at Over.

The Unit has also been revisiting the Flag Fen Basin, Peterborough, this time undertaking key-hole excavations along the internationally renowned Bronze Age timber alignment at Flag Fen, as part of a condition survey for Historic England. Closer to Cambridge, an exciting new major multi-phase excavation has also got under way at Land North of Cherry Hinton. Here, a series of rectilinear Middle



Neolithic long enclosure, Needingworth Quarry, Over.

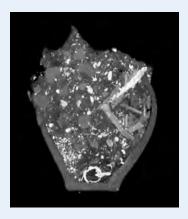
Bronze Age enclosures have already been revealed, together with an unusual circular post-built Late Bronze Age enclosure with central round-house and four-post structures. Another standout feature of the excavations is an impressive seventh-century Anglo-Saxon cemetery comprising 57 burials, some furnished with grave goods, among them a modified cowrie shell, copper-alloy studs with triskele design and a copper-alloy work box. A Roman cemetery was also found at this extraordinary site. This was the Unit's second of the year, following earlier excavation at Eastrea Road, Whittlesey, where a later Roman cemetery comprising five urned cremations and 23 inhumations were found, including stacked burials and decapitations.

In addition to our own projects, the CAU have continued to work collaboratively with other organizations throughout the year, notably MOLA on the A428



'Two Worlds' conference, April 2022.





CT scan of Roman cremation vessel containing metal bracelets, Eastrea Road, Whittlesey.



Modified cowrie shell from Saxon grave, Land North of Cherry Hinton.

Improvement Scheme. To date, the first excavations on this project have focused on a long-lived Iron Age and Roman settlement at Tempsford (Beds), comprising ditch-defined enclosures containing waterlogged deposits and important palaeoenvironmental



Anglo-Saxon graves under excavation, Land North of Cherry Hinton.

sequences. The Unit has also entered into a new partnership on the *Later Prehistoric Norfolk Project* with the Sainsbury Institute, University of East Anglia, and the Restoration Trust. This is a community-based project, the first stage of which was in September 2022, focusing on the re-excavation of Graham Clark's 1935 trenches at Arminghall Henge. Over 30 volunteers participated in the three-week long investigations, with the excavations attracting more than 450 visitors.

Behind the scenes, work on several monographs has progressed, with the CAU's volume on the Cambridge Biomedical Campus excavations at Addenbrookes (*Cattle, Community and Place*) now with readers, and two volumes detailing the excavations at Must Farm (*Must Farm Pile-dwelling Settlement*) also in the editing process; both of these should reach publication in 2023. Work on volumes for Ham Hill (Somerset), Northstowe, Babraham Institute and Over (Cambs) are also under way, with a flurry of papers continuing to appear on aspects of medieval Cambridge.

#### **Faculty of Classics**

MARTIN MILLETT

The Classical Archaeology group ('D Caucus') in the Faculty of Classics has had a productive period despite the pandemic. Our seminar series continued online throughout, resuming with inperson presentations in Michaelmas Term 2021. Contributions came from a wide range of speakers including Nathan Arrington (Princeton), Sylvian Fachard (Lausanne/Athens), Paolo Liverani (Florence), Carrie Murray (Brock University), Verity Platt (Cornell) and Maria Stamatopoulou (Oxford). In May 2022, we also hosted a seminar 'Roman urbanism in Italy: recent discoveries and new directions' that brought a broad group of those working on Italy to Cambridge.

A new AHRC-funded project *Roman York beneath the Streets* began in November 2021, with Thomas Matthews-Boehmer appointed as Research Associate on the project. He will be working with York Archaeological Trust and the York Museums Trust to fully review all past evidence for the Roman city. This work is complemented by new Ground Penetrating Radar surveys and a revision of the modelling of the sub-surface topography. Other Faculty fieldwork continued on the Roman towns at Aldborough in North Yorkshire (in collaboration with the Landscape Research Centre) and at Interamna Lirenas (Lazio, Italy), and new excavations at Harpham villa on the Yorkshire Wolds.

We were also joined by Dr Jana Mokrisova a Research Associate for *MIGMAG: Migration and the Making of the Ancient Greek World* (ERC Consolidator Grant; directed by Prof. Naoíse Mac Sweeney, University of Vienna). Classics also collaborated with the Faculty of Architecture and History of Art in the opening of their new Ax:son Johnson Centre for the Study of Classical Architecture in 2021, welcoming Dr Konogan Beaufay as a research fellow, working on Roman baths.

Finally, with the retirement of Martin Millett as the Laurence Professor in September 2022, the Faculty was delighted to announce the election of Prof. Michael Squire from KCL as his successor. He will take up the post in January 2023.



Excavation in progress at Aldborough, September 2021.

#### **Institute of Continuing Education (ICE)**

GILLY CARR

The Institute of Continuing Education (ICE) offers part-time University of Cambridge awards in Archaeology and Historic Environment at first-, second- and third-year undergraduate levels. Academic leadership in these areas are provided by Dr Gilly Carr, University Associate Professor in Archaeology.

University of Cambridge awards offered by the Institute include Certificate, Diploma and Advanced Diploma courses. ICE also offers non-accredited short courses; this has focused on the online programme throughout the pandemic, and has greatly increased in popularity. Gilly introduced a new course on *Holocaust Heritage* to create a triad with *Conflict Archaeology* and *Dark Heritage*.

All teaching at undergraduate level moved to remote delivery from March 2020 onwards. This has meant that ICE's students are now global, which has greatly enriched the teaching and learning experience, as students bring in case studies from across the world.

During the last two years, Certificates in *The Archaeology* of the Ancient World, The Archaeology of Ancient Britain, The Study of Early Medieval England and The Making of the English Landscape were offered, as well as Diplomas in Death and the Ancient World, and Conflict Archaeology and Dark Heritage. The Advanced Diploma in Research Methods was also successfully offered.



Conflict Archaeology students help excavate at Ravensbrück concentration camp.

#### **Members**

- Dr Helen Alderson (Museum of Archaeology & Anthropology) Archaeology of Oceania; Micronesia; colonialism
- Dr Oscar Aldred (Cambridge Archaeological Unit)
   North Atlantic; landscape archaeology; field archaeology; archaeological theory; past movement
- **Dr Martin Allen** (*Fitzwilliam Museum*)

  Later medieval English coins and tokens
- **Dr Emily Banfield** (Cambridge Archaeological Unit)
- Dr James Barrett (McDonald Institute)
   Medieval archaeology and historical ecology;
   ecological globalization; comparative study of
   maritime societies
- Dr Amélie Beaudet (Department of Archaeology)
  Human origins
- **Dr Marie Besnier** (Department of Archaeology) Assyriology
- Dr Trisha Biers (Department of Archaeology)
   Duckworth Collection Curator; human
   osteology; palaeopathology; death and display
- Dr Katherine Boyle (McDonald Institute)
   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)
   Mediterranean archaeology and history; Aegean
   prehistory; island archaeology; landscape
   archaeology; comparative world archaeology
- Dr Matthew Brudenell (Cambridge Archaeological Unit) Director
- Prof. Ulf Buentgen (Department of Geography)
   Environmental systems across space and time;
   dendrochronology
- **Dr Judith Bunbury** (Department of Earth Sciences)
  Geoarchaeology in Egypt
- Dr Gilly Carr (Institute of Continuing Education)
   Archaeology and heritage of WWII; German occupation of the Channel Islands
- Craig Cessford (Cambridge Archaeological Unit)
  Health and history in medieval Cambridge
- Dr Nikhil Chaudhary (Department of Archaeology)
   Human evolutionary and behavioural ecology
- Dr Anastasia Christophilopoulou (Fitzwilliam Museum)
   Assistant Keeper/Cyprus Curator
- Prof. Matthew Collins (McDonald Institute) McDonald Professor in Palaeoproteomics

· Dr Anwen Cooper

(Cambridge Archaeological Unit)
Prehistory of NW Europe; landscape
archaeology; material culture; social theory;
fieldwork

- Dr Enrico Crema (McDonald Anniversary Fellow) Modelling the emergence and evolution of cultural boundaries
- Dr Elizabeth DeMarrais
   (Department of Archaeology)
   Archaeological theory; Andean archaeology; settlement patterns
- Christopher Evans
   (Cambridge Archaeological Unit)
   British archaeology; Nepal; China; Cape Verde
- Dr Paola Filippucci (Murray Edwards College)
   Heritage; battlefields of the Western Front
- Prof. Charles French (Department of Archaeology)
   Landscape interpretation; soil micromorphology; scientific rescue archaeology
- **Dr Yannis Galanakis** (Faculty of Classics) Greek prehistory
- **Dr Christina Geisen** (Department of Archaeology) Egyptology
- David Gibson (Cambridge Archaeological Unit) Neolithic and Bronze Age
- Dr Caroline Goodson (Faculty of History)
   Early medieval Mediterranean; urbanism and built environment; environmental history
- Dr Adam Green (Department of Archaeology)
   Archaeology of inequality; ancient economics; sustainability; urbanism, landscapes and technology; South Asia
- Dr Jimena Lobo Guerrero Arenas (Museum of Archaeology & Anthropology)
   Senior Curator in World Archaeology
- Dr Susanne Hakenbeck
   (Department of Archaeology)
   Early medieval Europe; mortuary studies; archaeological theory; stable isotope analysis
- Dr Nancy Highcock (Department of Archaeology) Mesopotamian archaeology
- Dr Adam Howe (Department of Archaeology) Assyriology
- **Dr Jane Humphris** (*British Institute in Eastern Africa*) African archaeometallurgy
- Dr Guy Jacobs (Department of Archaeology)
  Human evolutionary genetics and
  bioinformatics
- Dr Liliana Janik (Department of Archaeology)
   Archaeological theory; visual cognition in rock art
- Dr Jody Joy (Museum of Archaeology & Anthropology) Senior Assistant Curator of Archaeology

- **Dr Richard Kelleher** (Fitzwilliam Museum)
  Assistant Keeper, Department of Coins and Medals
- Dr Alastair Key (Department of Archaeology)
  Palaeolithic archaeology
- **Dr Mark Knight** (*Cambridge Archaeological Unit*) Prehistoric and wetland field archaeology
- Dr Kathelijne Koops (Department of Archaeology)
   Primatology
- Prof. Christine Lane (Department of Geography)
   Geochronologist and Quaternary geographer;
   mechanisms, timing and environmental impacts of past climatic change
- Prof. Paul Lane (Department of Archaeology)
   Later Holocene archaeology of sub-Saharan
   Africa
- Dr Alessandro Launaro (Faculty of Classics)
   Archaeology and history of Roman Italy;
   landscape archaeology; economic history
- **Dr Sylvain Lemoine** (*Department of Archaeology*) Behavioural ecology and primatology
- Dr Sam Lucy (Newnham College) Anglo-Saxon archaeology
- Prof. Marcos Martinón-Torres (Department of Archaeology) Archaeological science
- Dr Francesca Mazzilli (Cambridge Archaeological Unit)
   Archaeological theory; Roman pottery; Roman religion; Roman Near East; Roman Britain
- Dr Augusta McMahon (Department of Archaeology) Mesopotamian archaeology and history; complex society; site biography
- Prof. Jianjun Mei
   (Needham Research Institute)
   Director; historical metallurgy and materials
- Prof. Martin Millett FBA (Faculty of Classics)
   Social and economic archaeology of the Roman world
- Dr Preston Miracle (Department of Archaeology)
   Palaeolithic and Mesolithic Europe;
   zooarchaeology; ethnoarchaeology;
   palaeoanthropology
- Prof. Marta Mirazon Lahr (Department of Archaeology)
   Role of East Africa in the evolution of human diversity
- **Dr Philip Nigst** (*Department of Archaeology*)
  Palaeolithic archaeology
- Dr Tamsin O'Connell (Department of Archaeology)
   Diet and nutrition in past and present human populations; stable isotope techniques
- Prof. Clive Oppenheimer (Department of Geography) Volcanic & magmatic processes; geoarchaeology; palaeoenvironments



#### Members (cont.)

- Prof. Robin Osborne FBA (Faculty of Classics) Iconography of 'everyday life' scenes on Athenian pots; the Classical Body
- Dr Andreas Pantazatos (Department of Archaeology) Heritage Studies
- **Dr Hratch Papazian** (*Department of Archaeology*) Egyptology
- **Dr Cameron Petrie** (*Department of Archaeology*) South Asian and Iranian archaeology
- Dr Daniel Pett (Fitzwilliam Museum)
   Head of Digital and IT
- **Dr Emma Pomeroy** (*Department of Archaeology*) Bioarchaeology; modern and ancient health; palaeoanthropology; human variation
- Dr Adrian Popescu (Fitzwilliam Museum)
   Ancient coins and medals
- Dr Paola Ricciardi (Fitzwilliam Museum)
   Museum Analytical Lab; cultural heritage
- Prof. John Robb (Department of Archaeology)
   Neolithic Europe; archaeological theory;
   symbolism and agency
- Dr Rihlat Said Mohamed (Department of Archaeology) Comparative human biology
- **Dr Peter Schauer** (*Department of Archaeology*)

  Quantitative and Biological Anthropology
- Dr Kate Spence (Department of Archaeology)
   Archaeology of ancient Egypt; urbanism and built environment; social history; art
- Dr Neal Spencer (Fitzwilliam Museum)
   Deputy Director (Collections and Research); Iron Age Nubia
- **Dr Nigel Spivey** (Faculty of Classics) Etruscan art and archaeology; Greco-Roman art; the anthropology of art
- Dr Marie Louise Stig Sørensen (Department of Archaeology)
   Bronze Age Europe; archaeological heritage studies; archaeological theory
- Dr Simon Stoddart
   (Department of Archaeology)

   Later European prehistory; landscape archaeology; complex societies; island communities
- Dr Helen Strudwick (Fitzwilliam Museum)
   Curator (Ancient Egypt)
- Dr Jon Tenney (Department of Archaeology)
   Assyriology
- Dr Carmen Ting (Department of Archaeology)
   Archaeological science; ancient technology; ceramic analysis; knowledge transfer
- Dr Susanne Turner (Faculty of Classics)
   Curator, Museum of Classical Archaeology

- Dr Laura van Holstein (Department of Archaeology) Biological anthropology
- Dr Alessio Veneziano
   (Department of Archaeology)
   Quantitative methods in archaeology and biological anthropology
- Dr Dacia Viejo Rose (Department of Archaeology)
   War-time destruction of cultural heritage and its post-war reconstruction
- Dr Caroline Vout (Faculty of Classics)
- **Prof. Eske Willerslev** (*Department of Zoology*) Prince Philip Chair of Ecology and Evolution
- Dr Rob Wiseman (Cambridge Archaeological Unit)
   Bronze Age Britain; Anglo-Saxon England; archaeological theory; conceptual metaphor and cognitive linguistics; historical linguistics

#### **Senior McDonald Fellows**

- Dr Robert Attenborough (Retiredy)
   Anthropological and archaeological genetics;
   evolutionary anthropology; human population biology and health
- Prof. Graeme Barker FBA (Retired)
   Landscape archaeology (Mediterranean, arid zone, tropical); transitions to farming
- Dr James Barrett (Norwegian University of Science and Technology)
   Medieval archaeology and historical ecology; ecological globalization; comparative study of maritime societies
- **Dr Roger Bland** (*Retired*)

  Portable antiquities and treasure
- Prof. Dilip Chakrabarti (Retired)
  Ancient India
- Dr Christopher Chippindale (Retired)
  Australian rock art
- Dr Kevin Edwards (Retired)
   Emeritus Professor of Physical Geography and adjunct Chair in Archaeology, Aberdeen; adjunct Chair in Anthropology at the Graduate Center of the City University New York
- Christopher Evans (Retired) British archaeology; Nepal; China; Cape Verde
- Prof. Robert Foley (Retired)
   Human evolution
- Prof. Charles French (Retired)
   Landscape interpretation; soil micromorphology; scientific rescue archaeology
- Dr Elizabeth French (Retired)
- Prof. Norman Hammond FBA (Retired)
   Origins, florescence and decline of Maya civilization in Mesoamerica
- Dr Catherine Hills (Retired)
   Anglo-Saxon England; Europe in migration and early medieval periods

- Prof. Martin Jones (Retired Archaeobotany; environmental archaeology; early agriculture
- Prof. Barry Kemp FBA (Retired)
   Egyptology
- Prof. Geoffrey Martin (Retired) Egyptology
- Prof. Nick Mascie Taylor (Retired) Human population biology and health
- Prof. Sir Paul Mellars FBA (Retired)
   Palaeolithic and Mesolithic archaeology
- Prof Susan Oosthuizen (Retired)
   Medieval archaeology
- Prof. Nicholas Postgate FBA (Retired)
   Assyriology; social and economic history
   of Mesopotamia
- Dr Kate Pretty (Retired)
- Prof. John Ray (Retired) Egyptology
- Prof. Lord Colin Renfrew FBA (Retired) Keros Project
- Dr Jane Renfrew (Retired)
  Uses of plants by prehistoric people; ancient agriculture
- Dr Colin Shell (Retired)
   2D & 3D geophysical survey
- Prof. Anthony Snodgrass FBA (Retired) Boeotia Project
- Dr Janice Stargardt (Retired)
   Archaeology of South and Southeast Asia
- Dr Marie Louise Stig Sørensen (Retired)
   Bronze Age Europe; archaeological heritage studies; archaeological theory

#### **McDonald Research Fellows**

- Dr Helen Alderson (Renfrew Fellow)
   Archaeology of women in Oceania; charting agency and expertise from deep past to present
- Dr Andreas Angourakis (Research Associate)
   TwoRains: Winter rain, summer rain adaptation,
   climate change, resilience and the Indus
   civilization
- Dr Tunde Babalola

(Smuts Fellowship, Centre for African Studies) Craft production, specialization and complex societies in West Africa; archaeology of glass making in Ile-Ife, Nigeria; early trade and exchange

- Dr Ema Baužytė (Research Associate) Fitzwilliam Museum
- Dr Konogan Beaufay
   (Faculty of Classics & Ax:son Johnson Centre for the Study of Classical Architecture)
   Design of Roman imperial-period bath buildings
- **Dr Nick Blegen** (Department of Geography)
  Ashes of our ancestors





- Dr Agnese Benzonelli (Research Associate) REVERSEACTION
- · Dr Roger Blench (Kay Williamson Educational Foundation) Linguistics and anthropology in West-Central Africa, Southeast Asia and Peru
- · Dr Michael Boyd (Stavros S. Niarchos Research Fellow) Icon and centre in the Cycladic early Bronze Age
- Dr Philip Boyes (Faculty of Classics) Bronze and Iron Age Levant; Ugaritic writing system
- Dr Emma Brownlee (Junior Research Fellow, Girton College) Scandinavian burial practices between the sixth and eighth centuries AD
- Dr Edgard Camarós (Marie Curie Postdoctoral researcher) TRAUMOBITA: The role of traumatic mortality in late human evolution from an integrated non-invasive bioarchaeological and taphonomic perspective
- Dr Katie Campbell (Junior Research Fellow, Kings College) Urban archaeology; field archaeology; medieval Central Asia and Caucasus; Mongol conquest
- Dr Simon Carrignon (Research Associate) ENCOUNTER: Demography, cultural change, and the diffusion of rice and millets during the Jomon-Yayoi transition in prehistoric Japan
- Craig Cessford (Research Associate) After the Plague; health and history in medieval Cambridge
- Dr Alfredo Cortell-Nicolau (Marie Curie Postdoctoral researcher) ArchBiMod - Agent-Based Modelling to assess the quality and bias of the archaeological record
- Dr Paloma de la Peña (Senior Research Associate) African Quarternary archaeology; hominin palaeoecology
- Dr Jenna Dittmar (Research Associate) After the Plague; health and history in medieval Cambridge
- Dr Kingsley Daraojimba (Newton International Fellow) Social settlement dynamics and environmental process in pre-colonial Nigeria: growing the Igbo-Ukwu urban/cultural landscape
- Dr Sarah Fiddyment (Research Associate) B2C: Beasts to Craft; biocodicology as a new approach to the study of parchment manuscripts
- · Dr Joshua Fitzgerald (Junior Research Fellow, Churchill College) Science of learning and material culture relating to Mesoamerica (especially 'Aztecs'); colonial Latin American history
- · Dr Anna Florin (Junior Research Fellow, St John's College) Early plant food use across the Wallace Line

- Dr Elizabeth Fowden (Faculty of Classics) Impact of the ancient city
- Dr Daniel Fuks (Rothschild Fellowship) Climate change, clash of civilizations, and collapse; archaeobotanical reconstruction of the Byzantine-Islamic Transition in the Negev

(Newton International Fellow) The flowering desert: First millennium CE agricultural developments in the Negev desert reconstructed from dung microbiomes and rubbish-dump plant remains

- Jason Gellis (Research Associate) **PALAEOANALYTICS**
- · Dr Marc Gener Moret (Marie Curie Postdoctoral Researcher) IBERIRON: The rise of iron technology in pre-Roman Iberia: a large-scale and multidisciplinary approach
- Dr Erik Gjesfjeld (Renfrew Fellow) ENCOUNTER: Demography, cultural change, and the diffusion of rice and millets during the Jomon-Yayoi transition in prehistoric Japan
- Dr Adam Green (Research Associate) TIGRESS: Transforming India's Green Revolution by Research and Empowerment for Sustainable food Supplies
- Dr Robert Harding (University College London) Early South Asia; archaeology of Buddhism
- · Dr Katherine Haworth (Junior Research Fellow, Kings College)
- Dr Jeremy Hill (British Museum) Head of Research, British Museum
- Dr Harriet Hunt (Research Associate) Crops, Pollinators and People
- Dr Sarah Inskip (Research Associate) Health and history in medieval Cambridge (palaeopathology)
- Dr Simon Kaner (University of East Anglia) Director, Centre for Japanese Studies; Japanese archaeology and cultural heritage; archaeology at the extremities of the Silk Road
- Dr Cynthia Larbey (Renfrew Fellow) What has been the evolutionary advantage of the human carbohydrate diet over non-human primates?
- Dr Diane Lister (Research Associate) Genetic analysis of historical barley landraces; spread of cereal cultivation across Europe
- Dr Yang Liu (Research Associate) Crops, pollinators and people: the long-term dynamics of a critical symbiosis
- Dr Emma Loftus (Leverhulme Early Career Fellow) Coastal Origins: earliest human occupation of the shoreline
- Dr Alex Loktionov (Junior Research Fellow, Christ's College) Egyptology; Egyptian justice of the third and second millennia BCE

- Dr Lucía López-Polín Dolhaberriague (Research Associate) Shanidar Cave
- Dr John MacGinnis (Research Associate) Ziyaret Tepe Archaeological project
- Dr Beatriz Marín Aguilera (Renfrew Fellow) Bodies Matter: A comparative approach to colonial borderlands
- Dr Javier Martinez-Jiménez (Faculty of Classics) Impact of the ancient city
- · Dr Thomas Matthews-Boehmer (Faculty of Classics)

Burials and funerary practices in the Roman West

- Dr Stefania Merlo (Senior Research Associate) Mapping Africa's Endangered Sites and Monuments
- Dr Piers Mitchell (Department of Archaeology & Consultant Orthopaedic Surgeon, Peterborough) Palaeopathology/ancient diseases in humans
- · Dr Jana Mokrisova (Faculty of Classics) Bronze and Iron Age eastern Mediterranean; archaeology of mobility
- Dr Douglas Momberg (Research Associate) Life history theory in maternal and child health: formative research in South Africa
- Dr Nicolas Nikis (Marie Curie Postdoctoral Researcher) ARCAN: Archaeology of exchange networks in Central Africa.: the cases of the copperbelt and Niari Basin copper deposits
- Dr Rune Rasmus Olsen (Research Associate) Navigating new economic networks in ancient Egypt
- Dr Sam Ottewill-Soulsby (Faculty of Classics) Impact of the ancient city
- Dr Sara Owen (Faculty of Classics) Greek archaeology; culture contact and exchange; Greek 'colonization'
- · Dr Nik Petek-Sargeant (Marie Curie Postdoctoral Researcher) HEATT: Historical East African Archaeology and Theory
- Dr Monica Ramsey (Leverhulme Early Career Fellow) Increasingly anthropogenic landscapes and evolution of plant food production; humanenvironment interactions during the final Pleistocene and early Holocene in the Levant
- Dr Rebecca Roberts (Research Associate) Mapping Asia's Endangered Sites and Monuments Project
- Dr Jaap Saers (Research Associate) Effects of mobility and physical activity on human postcranial skeletal variation
- Dr Ester Salgarella (Junior Research Fellow, St John's College) Bronze Age Aegean writing systems, especially Linear A & B



## McDonald Research Fellows (cont.)

- Dr Christiana Scheib
  - (Junior Research Fellow, St John's College)
    Tracing the spread and impact of bubonic
    plague during the Anglo-Saxon period in
    England
- **Dr Julia Shaw** (*University College London*)
  South Asian archaeology
- Dr Laurence Smith (Independent Scholar)
  Suakin Project
- **Dr Pamela Jane Smith** (Independent Scholar) History of archaeology
- Dr Alexander Sollee (Research Associate)
   Memories for Life: Materiality and Memory of Ancient Near Eastern Inscribed Private Objects
- Dr Philippa Steele
  - (Senior Research Associate, Faculty of Classics) VIEWS Project; Visual Interactions in Early Writing Systems
- Dr Christopher Stevens (Research Associate) ENCOUNTER: Demography, cultural change, and the diffusion of rice and millets during the Jomon-Yayoi transition in prehistoric Japan
- Dr Néhémie Strupler (Swiss National Science Foundation Early Postdoc Mobility Fellowship) SCATTER: The Scaling Territories Project. How Bronze Age inhabitants in Anatolia redefined their territories within expanding centralised power? On the traces of human occupation and territorial expansion (claims)
- Dr Federica Sulas

(A.G. Leventis Foundation Post-Doctoral Research Associate in African Archaeology) African archaeology

- Dr Jeremy Tanner (University College London) Greek and Roman art; early Chinese art; sociology of art; comparative art; art and archaeology
- **Dr Matthew Teasdale** (*Research Associate*) *B2C: Beasts to Craft:* biocodicology as a new approach to the study of parchment manuscripts
- · Dr Julia Tejada

(Marie Curie Postdoctoral Researcher) FEPS: Evolution on an island continent: feeding ecology of Pleistocene sloths

- Dr Jess Thompson (Research Associate)
   ANCESTORS: Making ancestors: the politics of death in prehistoric Europe
- Dr Carmen Ting (Renfrew Fellow)
   Archaeological science; ancient technology; ceramic analysis; knowledge transfer
- Dr Christina Tsouparopoulou (Senior Research Associate)
   Memories for Life: Materiality and Memory of Ancient Near Eastern Inscribed Private Objects

- **Dr Toby Wilkinson** (*Research Assistant*) Kythera Island Project
- Dr Ashleigh Wiseman (Leverhulme/Isaac Newton Trust Early Career Fellowship)
  How to build a hominin: predictive simulations of locomotion in human evolution
- Dr Guohua Yang (Senior Research Associate)
   Yangshao Culture: 100 Year research history and heritage impact

#### **Research Assistants**

- Mahmoud Abdelrazak
   Mapping Africa's Endangered Archaeological
   Sites and Monuments
- Abdul Jabbar
   Mapping Archaeological Heritage in South Asia
- Pippa Browne
   Memories for Life: Materiality and Memory of
   Ancient Near Eastern Inscribed Private Objects
- Rosie Campbell
   Mapping Archaeological Heritage in South Asia

Petrus Gerrits

Mapping Archaeological Heritage in South Asia

- Dr Lily Green TIGR<sup>2</sup>ESS
- Afifa Khan
   Mapping Archaeological Heritage in South Asia
- Abbas Khan Rabayat-khan
   Facing emotions: visual art meets machine learning
- Maria Suarez
   Mapping Archaeological Heritage in South Asia
- John Tomaney
   Mapping Archaeological Heritage in South Asia

## Field Archaeologist in Residence

- Christopher Evans
   (Cambridge Archaeological Unit)
   British archaeology; Nepal; China; Cape Verde
- Virgil Yendell (MoLA)
   Geoarchaeology; modelling past Thames River levels

#### **Honorary Research Associates**

- Prof. Stanley Ambrose (University of Illinois) Archaeological science and geochemistry
- Dr Giovanna Bagnasco (Department of Cultural and Environmental Heritage, Milan)
   Etruscan cultural history
- **Dr Britt Baillie** (Centre for Urban Conflicts Research, University of Cambridge)
- Dr Letizia Ceccarelli (British School at Rome)
   Etruscan and Roman archaeology

- Prof. Shadreck Chirikure (University of Cape Town) African archaeology
- Prof. Felipo Criado-Boado (Institute of Heritage Sciences; Spanish National Research Council)
   Director on the Spanish National Research Council
- **Dr Erik Gjesfjeld** (John Templeton Foundation) Program Officer
- Dr Tina Greenfield

(Cambridge Expedition to the Valley of the Kings and NKRF Mission to the Western Wadis) Joint Field Director; Egyptian archaeology

- **Prof. Colin Haselgrove** (*University of Leicester*) Late Iron Age archaeology
- Prof. Christine Hastorf (University of California Berkeley)
   Palaeoethnobotany and Andean archaeology
- **Prof. Poul Holm** (*Trinity College, Dublin*) Environmental history
- Dr Evangelina Kiriatzi (British School at Athens)
   Director, Fitch Laboratory; Co-director, Kythera
   Island Project; ceramic technology, petrography
   and chemical analysis; Bronze Age in the
   southern Aegean and Macedonia
- Dr Toomas Kivisild (KY Leuven) Human genetics
- Dr Kathelijne Koops (SNSF Eccellenza Professorial Fellow, University of Zurich)
   Primatology
- Piers Litherland (Mission Head and Joint Field Director, Cambridge Expedition to the Valley of the Kings and NKRF Mission to the Western Wadis) Egyptian archaeology
- Dr Sade Mire (Head of Archaeology for Somaliland; Director, Horn Heritage Foundation) Egyptian archaeology
- Prof. Piers Mitchell (Consultant orthopaedic surgeon, Peterborough General Hospital)
   Palaeopathology and palaeoparasitology
- Prof. Johannes Mueller
   (Director, Institut für Ur- und Frühgeschichte, Christian-Albrechts-Universität)
   Prehistoric archaeology
- Prof. Alessandro Naso
   (Director, Institute for Ancient Mediterranean Studies, National Research Council of Italy)
   Italic cultures; material culture and models of trade
- Dr Hector Orengo (Catalan Institute of Classical Archaeology) Remote sensing applications in archaeology
- **Dr Anthony Pace** (Superintendance of Cultural Heritage, Malta) Maltese heritage
- Dr Innocent Pikirayi (University of Pretoria) African archaeology
- **Dr Ronika Power** (*Macquarie University*) Biological anthropology



• Prof. Thilo Rehren

(Director of STARC, Cyprus Institute)
Science and Technology in Archaeology; Culture
Research Centre

• Prof. Robert G. Scaife

(University of Southampton)
Palaeoecologist, archaeobotanist; analysis of pollen, diatoms and charred plant remains

- Dr Christiana Scheib (University of Tartu) Head of Ancient DNA Laboratories
- Prof. Ravindra Nath Singh (Banaras Hindu University)
   Co-director, Land, Water and Settlement and TwoRains projects
- Prof. Matthew Spriggs
   (Australian National University)
   Oceanic archaeology; archaeology and language; meshing of aDNA and archaeological data and theory
- Dr Anna Stevens (University of Melbourne)
  Deputy Director, Amarna Project
- Dr Mary Anne Tafuri (Sapienza Università di Roma) Isotope specialist
- Prof. Ibrahima Thiaw (IFAN-Université Cheikh A. Diop)
   Archaeology and legacies of enslavement
- María Alicia Uribe Villegas (Director, Museo del Oro, Columbia)
   Pre-Hispanic goldwork
- Dr Marc Vander Linden (Department of Archaeology) Late Prehistoric Europe
- Dr Selena Wisnom (University of Oxford)
   Assyriology
- Prof. Ezra Zubrow (University at Buffalo)
   Archaeological theory, with a specific interest on palaeodemography, spatial analysis and simulation

#### **Visiting Scholars**

- Prof. Mohamed Ahmed Radi Abouarab (Kafrelsheikh University)
   Egyptology
- Prof. Ali K. Al-Belushi (Sultan Qaboos University)
   Archaeological resources and modernization in the Arab States of the Gulf: controversy and challenges
- Prof. Arie K. Altman (Professor Emeritus, Emeritus, Hebrew University of Jerusalem) Agricultural biotechnology
- Dr Mathias Bjørnevad-ahlqvist (University of Copenhagen)
   Transition to the Neolithic in Denmark, Britain and Ireland

- Prof. Ariane Burke (Université de Montréal & Beaufort Visiting Fellow, St John's College)
   Human/environment interactions during prehistory; archaeology of climate change and spatial cognition
- Dr Doaa El Kashef (Sadat City University) Ancient Egyptian society
- Dr Miguel Gonzalez Torres (University of the Basque Country) Heritage
- Dr Eliza Guerra (University of Valladolid)
  The Power of Ecstasy: altered states of consciousness and psychoactive substances in the Copper Age social dynamics of the Iberian peninsula
- Dr Michael Kempf (Masaryk University)
   Spatial patterns of human–environment interactions across Europe
- Prof. Kenichi Kobayashi (Chuo University)
   Neolithic cultures across Eurasia; settlement archaeology; radiocarbon dating
- **Dr Luigi Magnini** (University of Sassari) Methods and theory of archaeological research
- Dr Ana Belen Marin Arroyo (University of Cantabria)
   Subsistence and human resilience to sudden climatic events in Europe during MIS3 – SUBSILIENCE
- Dr Andre Ollé (Institut Català de Paleoecologia Humana i Evolució Social)
   Lithic technology; functional analysis of Palaeolithic stone tools; Atapuerca
- Prof. Theresa Singleton (Syracuse University)
  Pitt Professor of American History and
  Institutions
- Dr Marte Spangen
   (UIT, Arctic University of Norway & Clare Hall)

   Isotope and archaeological studies of movements and landscape negotiations in medieval northern Fennoscandia
- Dr Anna Spyrou (Cyprus Institute)
   Twinning training programme
- Prof. Bing Wang (Zhejiang Sci-Tec University)
   Archaeological science; paleoproteomics and immunoassay; ancient silk and other textiles

#### **Affiliated Scholars**

- Dr Flaminia Bartolini (Independent Scholar) Heritage
- **Prof. Ian Baxter** (University of Suffolk) Heritage
- Dr David Beresford-Jones (Independent Scholar)
   Transition to agriculture and human ecology in South America
- Dr Marie-Françoise Besnier (Independent Scholar)
   Assyriology

- Dr Letizia Ceccarelli (Independent Scholar)
  Sanctuaries in Latium vetus, especially the site of Ardea
- Dr Alessandro Ceccarelli (Independent Scholar)
- Dr Alan Clapham (Independent Scholar) Archaeobotany
- Prof. Josephine Crawley Quinn (University of Oxford)
   Roman history, art, archaeology and architecture; Mediterranean history and archaeology; ancient religion; gender studies
- **Dr Ann de Vareilles** (Independent Scholar) Archaeobotany
- Dr Paola Di Giuseppantonio Di Franco (Marie Curie Postdoctoral Researcher)
   Digital artefacts: how people perceive tangible cultural heritage through different media
- Dr David Friesem (Independent Scholar)
   Tropical micro-archaeology, related to 'hunter-gatherer' use of space
- Barrie Fuller (Chair, Cambridge Archaeology Field Group) Landscape history and field archaeology in a volunteer group capacity
- Dr Caleb Howard (Tyndale House, St. Edmund's College) Onomastics project
- Dr Sabine Laemmel (Independent Scholar)
  Ancient Egyptian pottery
- Dr Bryan Lintott (Independent Scholar)
   Sites, structures and artefacts located in extreme environments beyond national boundaries; ascribed heritage significance
- Dr Maya Mise (Independent Scholar)
   Mediterranean archaeology, pottery;
   reconstruction of ancient trade
- Dr Ioanna Moutafi (Independent Scholar)
   MYSOBIO: Deciphering the interplay of funerary
   treatment and social dynamic in the Mycenaean
   period
- Dr Janine Ochoa (Independent Scholar)
   Zooarchaeology
- **Dr Jacke Phillips** (School of Oriental and African Studies) Suakin project
- Dr Jacobus Saers (Independent Scholar)
   Human variation and adaptation with digital methods in functional morphology
- Dr Ceri Shipton (University College London)
  Palaeolithic archaeology
- **Dr Laurence Smith** (Wolfson College) Suakin project; African archaeology
- **Dr Nigel Strudwick** (Independent Scholar) Egyptology
- Dr Shadia Taha (Wolfson College)
   Cultural heritage; ethnography; qualitative research; community engagement; outreach projects



#### Affiliated Scholars (cont.)

**Dr Helen Taylor** (Independent Scholar) Human cognitive evolution; dyslexia

- Dr Simon Timberlake (Independent Scholar)
   Field archaeology and geology; early metal mining
- Dr Lucy Walker (Independent Scholar)
   Archaeolink
- Dr Jean Wilson
   (Vice-President, Church Monuments Society)
   Material culture and imagery of the Early
   Modern period; funerary monuments in Britain
   AD 1500–1700

#### **Postgraduate Students**

#### **PhD Students**

- Ethan Aines (Department of Archaeology)
   2020–21 The Memory of a Forgotten Landscape.
   A Socio-topographical Inquiry into the Metal Detected Remains of Later Prehistoric Norfolk
- Iqtedar Alam (Department of Archaeology) 2021–22 Urban Water History of Shahjahanabad (1639–1857) Delhi: A Study of Water Culture of the 'Last & Greatest Capital' of the Mughal Empire
- Camila Concepcion Alday
   (Department of Archaeology) 2020–22 The Dance of Making Fibres: A Study of the Earliest Plant-Fibre Technology by Marine Hunter-Gatherers on the Pacific Coast of South America
- Saltanat Amirova (Department of Archaeology) 2020–22 Goldsmithing Technologies, Organic Materials and Funerary Rituals in the Saka Societies of the Eurasian Steppe Region during the Iron Age (c. 900–100 BCE)
- Oliver Antczak (Department of Archaeology) 2020–22 Interrupted Histories, Continuous Feeling: Indigenous Identity Formation and Notions of Heritage in the Southern Caribbean
- Monique Arntz (Department of Archaeology)
   2020–22 Beyond Meaning: An Artefact Approach
   to the Neolithic Figurines from Tell Sabi Abyad
   (Syria) and Çatalhöyük (Turkey)
- Alex Reina Barker (Department of Archaeology) 2020–22 Humour in Akkadian Literature: A Contextual Analysis
- **Tristan Begg** (*Biological Anthropology*) 2020–22 The Beethoven Genome Project
- Jeremy Bennett (Department of Archaeology)
   2020–22 Managing the Agrarian Environment in Prehistoric Malta and Gozo
- Joshua Christopher William Bland (Department of Archaeology) 2021–22 Football Clubs as Cultural Lifejackets: England's Football Clubs as Industrial Relics
- Rachel Kate Blevis (Department of Archaeology) 2020–22 Noise into Signal: Identification Challenges and the Medieval Fishing Revolution

- Alette Anne Blom (Department of Archaeology) 2020–22 A Multidisciplinary Approach to Reconstructing the Lived-experience of Medieval Hansen's Disease (Leprosy) Sufferers
- Kathryn Boulden (Department of Archaeology)
   A Bioarchaeological Reassessment of Livestock Management Practices between the Neolithic and the Roman Period in Wessex
- Leah Marion Brainerd (Department of Archaeology) 2020–22 Move On Up: Evaluating the Spread of Agriculture During the Jomon– Yayoi Transition in Japan Through Ideal Distribution and Agricultural Suitability Models
- George Brill (Biological Anthropology) 2021–22
   Human Locomotor Versatility and the Nature of Human Locomotor Performance
- Ella Jane Macleod Brown (Department of Archaeology) 2020–22 Functional Adaptation of Trabecular Bone in the Mandibular Condyle of Human and Non-Human Primate Populations
- Pippa Browne (Department of Archaeology) 2020–21 An Investigation into the Agency and Operation of Food offerings in Old Kingdom Private Mortuary Cults at Saqqara
- Doudou Cao (Biological Anthropology) 2021–22 Long-term Perspectives on Human Adaptive strategies at High-altitude: A Comparative Study of Archaeological Himalayan Residents from the Tibetan Plateau
- James Clark (Biological Anthropology) 2020–22
   Seasons of Change: Investigating the Role of Seasonality in the Oldowan-Acheulean Transition
- Malcolm Connolly (Department of Archaeology)
   Building a Picture of Desert Abandonment
   during Extreme Climate Phases. Settlement
   Patterns and Site Formation Processes in the
   Desert Uplands 'Refuge', Australia
- Keziah Conroy (Biological Anthropology) 2020– 22 From Provinciality to Trans-continentality: The Evolving Scale of Hominin Species Ranges
- Laura Elizabeth Courto (Department of Archaeology) 2020–22 Scrimshaw: Unlocking the Cultural and Biological Archive of Sea Mammal Art
- Thomas Crowley (Department of Archaeology) 2020–22 To Change Is To Be: The Kalasha of Pakistan's Afghan Frontier and the Age of Heritage
- Leanne Margaret Daly (Department of Archaeology) 2020–22 Home from Away: Challenging Extinction Discourse through the Repatriation of Indigenous Beothuk Human Remains
- Mark Edward Davis (Department of Archaeology) 2020–22 Brass vs Bronze: Continuity and Change from Late Antiquity to the Early Islamic Period in the Persian Gulf and Adjacent Regions

- Edwin de Jager (Biological Anthropology) 2021– 22 How Did the Human Brain Evolve? Tracking Cerebral Changes in the Fossil Hominin Record Using Advanced Imaging Techniques and 3D Modelling
- Elifgül Dogal (Department of Archaeology) 2020–22 Politics, Identity and Ethics in Heritage Preservation: Managing Archaeological Human Remains in Turkey
- Miranda Anita Evans (Department of Archaeology) 2021–22 The Palaeoproteomics of Pottery and its Application to Romano-British Foodways
- Lewis Ferrero (Department of Archaeology) 2020–22 Invisible Craft, Visible Tools: An Investigation of Textile Tools in Iron Age Southern Britain
- Emilia Franklin (Biological Anthropology) 2020– 22 Plague Pits and Parish Cemeteries: Exploring the Palaeodemographic Influence of the Second Pandemic on Medieval Skeletal Assemblages
- Dylan Andrew Charles Gaffney (Department of Archaeology) 2020–22 Taking the Northern Route: Research into the Initial Colonisation of Insular Rainforests by Archaic and Modern Humans
- Devlin Alexander Gandy (Department of Archaeology) 2020–22 Since Time Immemorial: Utilizing Ancient eDNA to Reevaluate Human Presence in the Americas during the Late Pleistocene
- Jason Gellis (Biological Anthropology) 2020–22
   Root Problems in Human Variation
- Ali Giritlioglu (Biological Anthropology) 2020–22
   A Behavioural Ecological Analysis of the Rise and Fall of Social Stratification and Labour Coercion in Late Medieval and Early Modern Europe: the Fitness Effects on the Dominant & the Subordinate in Changing Environments
- Jonathan R Goodman (Biological Anthropology) 2020–22 Evolutionary Explanations of Nonsemantic Signals in Human Language
- Julia Ann Gustafson (Department of Archaeology) 2021–22 The Nuragic Landscape of Siddi Through Space, Time, and Memory
- Rebecca Haboucha (Department of Archaeology) 2020–21 Envisioning Sustainable Heritage in the Face of Climate Change: A Call to Align National Heritage Management Policies across Borders
- George Robert Heath-Whyte (Department of Archaeology) 2020–22 Bēl and Marduk in the First and Late-Second Millennium BC
- Stuart Edward Henderson (Department of Archaeology) 2020–22 The English Leather Industry during the Long 19th Century
- Raphael Henkes (Department of Archaeology) 2020–22 Towards a More Holistic Approach to the Management of Space and Buffer Zones at Difficult Heritage Sites



- Yi-Ting Hsu (Department of Archaeology) 2020– 22 Fire Assay, Cupellation and the Dissemination of Technical Knowledge in Post-Medieval Europe
- Katrien Janin (Biological Anthropology) 2020–22
   The Evolutionary Role(s) of Integration and
   Modularity on the Morphology of the Primate
   Pelvic Girdle
- Friederike Katharina Jürcke (Department of Archaeology) 2020–22 On the Road to Urbanism: Modelling Movement across the Iranian Plateau in the Fourth and Third Millennia BC
- Kyra Elise Kaercher Department of Archaeology) 2020–22 Production and Consumption of Middle Islamic Ceramics (1000–1500 cE) in Western Asia: A View from the Countryside
- Amanpreet Kaur Kang (Department of Archaeology) 2021–22 Zooarchaeology by Mass Spectrometry (ZooMS): Utilising New Methods to Unravel Hominin Cognition From Worked Bone
- Pavlina Kapsali (Department of Archaeology) 2020–22 Material Culture Performativity and the Making of Collectives: Studying Living Environments in Mainland Greece 2500–2000 BCE
- David Kay (Department of Archaeology) 2020–22
   The Changing Rhythms of Settlement and Domestic Space in Marakwet, Northwest Kenya
- Kevin Kay (Department of Archaeology) 2020–21
   The Material Politics of Houses at Çatalhöyük,
   7000–6300 BCE
- Geon Young Kim (Department of Archaeology)
   2021–22 The Role of Museums in the Practice of Reconciliation: the case of South Korea
- Hyunjae Kim (Department of Archaeology) 2021–22 An Analysis of the 'Non-Elite' Colonial Heritage and its Postcolonial Perception by the Local Community in Busan, South Korea
- Andrea Kocsis (Department of Archaeology) 2020–22 The Role of WWI Commemorations in National Mythmaking
- Marta Krzyzanska (Department of Archaeology) 2020–22 The Dispersal of Common Buckwheat (Fagopyrum esculentum) across Eurasia, after its Domestication in the 6th Millennium BP in China
- Elizabeth Moorehead La Duc (Department of Archaeology) 2020–22 The Use of Coal for Ferrous Metallurgy in Roman Britain
- Rafael Laoutari (Department of Archaeology) 2020–22 Social Dynamics in Non-urban Societies: A Multi-scalar Analysis of Social Interaction in Prehistoric Bronze Age Cyprus
- Joanna Lawrence (Department of Archaeology) 2020–21 Human Conceptualizations of Nonhuman Animals in the Scandinavian Bronze Age: Perspectives from Swedish Rock Carvings
- Samantha Leggett (Department of Archaeology) 2020–21 'Tell me what you eat, and I will tell you who you are': A Multi-Tissue and Multi-Scalar Isotopic Study of Diet and Mobility in Early Medieval England and its European Neighbours

- Rennan Lemos (Department of Archaeology) 2020–21 Foreign Objects in Local Contexts: Mortuary Objectscapes in Late Colonial Nubia (16th–11th Centuries BC)
- Joseph Lewis (Department of Archaeology) 2020–22 Modelling Roads in Roman Britain
- Michael Lewis (Department of Archaeology) 2020–22 Social Transformations and Modes of Ceramic Production during the Fourth–Early Third Millennium BCE in the Shahrizor Plain and Bazyan Valley, Iraqi Kurdistan: A Petrographic and Geochemical Study
- Huiru Lian (Department of Archaeology) 2020–21
  Water and City Development in Southeast
  China: Geoarchaeology Case Study of the
  Construction, Occupation and Abandonment of
  the Ancient Liangzhu City
- Min Lin (Department of Archaeology) 2020–22
   Comparing the Construction of Social Identity in Early Iron Age Greek and Eastern Zhou Dynasty Rich Female Burials
- Shiting Lin (Department of Archaeology) 2021–22
   Depreciation or Valorisation? The Formation and Effects of the Commercial Use of Yangshao Culture for Branding and Product Sevelopment
- Junting Lyu (Department of Archaeology) 2021– 22 Yangshao Culture Heritage and National Identity: Focusing on National Archaeological Site Parks
- Ruairidh Macleod (Department of Archaeology) 2021–22 Palaeo-omics of Mid-Holocene Hunter-Gatherers at the Lake Baikal Region Siberia: First Year Report
- Gian Battista Marras (Department of Archaeology) 2021–22 Holocene Human– Environmental Interactions and Climate Change in the Western Mediterranean: A Comparative Study from Sardinia
- Thomas Jacob Matthews Boehmer (Department of Archaeology) 2020–22 Tracking Identity Change and Societal Shift in the Late Iron Age and Early Roman Southern North Sea Basin. Can New and Alternative Narratives Be Constructed to Describe the Archaeological Developments of the Period?
- Eleanor Maw (Department of Archaeology) 2020– 22 The Yorkshire Wolds: Assessing Continuity and Change in the Rural Iron Age and Romano-British Landscape
- Glynnis Caitlin Maynard (Department of Archaeology) 2020–22 The Yorkshire Wolds: Assessing Continuity and Change in the Rural Iron Age and Romano-British Landscape
- Selene Mazza (Department of Archaeology) 2020–22 Human–Animal Relationships in the Viking Age (c. 750–1050 ce): Relational Approaches to Animals in Funerary Contexts
- Julia Montes Landa (Department of Archaeology)
   Evolution, Co-existence and Adaptation of Bronze-making Recipes in Prehistory:
   Northeastern Iberia as Study Region

- Sara Morrisset (Department of Archaeology)
   2020–22 Art and Collective Identity: Production
   Processes and Trade in the Ica Valley on the
   Peruvian South Coast
- Bram Mulder (Department of Archaeology)
   2020–21 Functional Adaptation in Cortical
   and Trabecular Bone. Differential Effects of
   Mechanical Loading and the Implications for
   Reconstructions of Past Activity
- Lucia Nadal Urias (Biological Anthropology) 2020–22 Factors of Craniomandibular Morphological Variation in the Robust Australopithecines
- Marianna Emilia Sofia Negro (Department of Archaeology) 2021–22 The Archaeological Landscape of the Gubbio Valley. A Post-colonial Evaluation of the Relationship between Roman and Umbrian Cultures
- Chioma Ngonadi (Department of Archaeology) 2020–22 Early Agricultural Communities in Lejja, South-eastern Nigeria: An Archaeobotanical Investigation
- Christos Nikolaou (Department of Archaeology) 2021–22 Hybridity, Culture Contact and Colonial Relations in the Hellenistic Far East with Regards to Urbanism and Religion
- Bongumenzi Nxumalo (Department of Archaeology) 2020–21 The Role of Hydrological Changes in the Demise of Iron Age State Societies in Southern Africa: An Integrative Study of Mapungubwe, South Africa
- Stanley Jachike Onyemechalu (Department of Archaeology) 2021–22 Heritage and the Legacies of Violent Conflict: The Biafra War (1967–1970) and Present-day Igboland Nigeria
- Peerapat Ouysook (Department of Archaeology)
  2020–21'l Write Therefore I Am': Reading the
  Ideologies of Nebuchadnezzar Through His
  Inscriptions
- Sarah Paris (Department of Archaeology) 2020–22 The Use of Ochre and Taphonomic Processes in Prehistoric Burial Practices
- Taylor Michelle Peacock (Department of Archaeology) 2021–22 Questioning Sex: A Critical Feminist Approach to Skeletal Analysis and Skeletal Sex Estimation
- Victoria Pham (Biological Anthropology) 2020–22
   Repertoire in Deep Time: An Evolution of Rhythmic Signalling
- Chike Sekou Pilgrim (Department of Archaeology) 2021–22 Beginnings at Banwari: A Landscape Historical Ecology Study of the Earliest Human Colonisation of Trinidad
- Mariana Pinto Leitão Pereira (*Department* of *Archaeology*) 2020–22 The Significance of Heritage in Dispersed Communities: Portuguese and Macanese as a Case Study
- Grace Carol Pyles (Department of Archaeology) 2020–22 Chasing Unicorns: Material Culture, Legend, and Reality in Ancient and Medieval Europe Legend



#### Postgraduate Students (cont.)

- Sophie Rabinow (Biological Anthropology) 2021– 22 A Multi-proxy Approach to Freshwater and Marine Fish Consumption in the Low Countries (11th-17th Centuries)
- Natasha Jasmine Kaur Rai (Department of Archaeology) 2021–22 Old Kingdom Buhen in Context: Egyptian-Nubian Social and Political Dynamics in Indigenous Landscapes
- Ismael Rodriguez Palomo (Department of Archaeology) 2021–22 Computational Methods for the Study and Integration of Palaeoproteomics and Inorganic Analysis in Ceramics Plasters and Parchment
- Alice Rose (Department of Archaeology) 2020–21 Life in Medieval Cambridge: An Isotopic Analysis of Diet and Mobility
- Kim Eileen Ruf (Department of Archaeology) 2020–22 (Re)Use and Valuation of Historic Buildings – A Comparison Between the AHD and Private Individuals
- Sergio Giuseppe Russo (Department of Archaeology) 2020–22 Cultural Variation and Spatial Structures in the Northern Lands: A Geostatistical Application for the Bronze Age Ancient Near East (c. 2350-1550 BCE)
- Alisa Santikarn (Department of Archaeology) 2020-22 The Last Elephant Catchers: (In) Visible Indigenous Heritage in Thailand
- Nicola Mary Savage (Department of Archaeology) 2021–22 Waste Land Not Wasted Land. Change and Continuity in the Significance and Exploitation of Uncultivated Land from Late Prehistory to the Norman Conquest in Southern
- Lucia Scalise (Biological Anthropology) 2021–22 Unravelling Cremation: A Multi-analytical Approach to the Study of Bronze Age Cremated **Human Remains**
- Elena Scarsella (Department of Archaeology) 2020-22 Mediterranean Highlanders: Connectivity and Identity in Late Prehistoric Central Italy
- Ann Frijda Schmidt (Department of Archaeology) 2021–22 Feeding the Etruscans
- Elisa Scholz (Department of Archaeology) 2020– 22 A Communications Revolution in the Central Mediterranean?
- Susan Shay (Department of Archaeology) The Right to Control the Land: Heritage and Selfdetermination by Native Hawaiians
- · Charles Brendan Simmons (Department of Archaeology) 2020–22 The Evolution of Leadership and Inequality: An Analysis of the Jomon and Yayoi Settlements in Kohoku New Town
- Frances St George-Hyslop (Biological Anthropology) 2020–21 The Role of CNTNAP2 Gene in Human Neocortex Evolution and Development

- Alicia Victoria Stevens (Department of Archaeology) 2020–22 Cultural Heritage, Remembrance and the Peace Process in Post-Junta Myanmar
- Meghan Strong (Department of Archaeology) Illuminating the Path of Darkness: Social and Sacred Power of Artificial Lighting in Pharaonic Period Egypt
- Emily Margaret Carole Tilby (Department of Archaeology) 2020–22 Neanderthal and Modern Human Adaptations to Climate Change in Southwest Asia: Climate Reconstruction of Marine Isotope Stage 5-3 (130-29 ka) Based on Small Mammal Records from Shanidar Cave (Iraqi Kurdistan)
- **Joanna Tonge** (*Department of Archaeology*) 2021–22 Maritime Mimesis: Investigating the Heritage of Appropriation, Innovation and Technological Advantage in the Historic Canoes of the Hawaiian Islandsl
- Thomas Løth Torp-Hansen (Department of Archaeology) 2020–22 Archaeology in the British Mandate of Palestine between WWI and WWI
- Rhea Tuli Partridge (Department of Archaeology) 2020-22 The 'Complications' of the Clive Collection: 'Conflict' Culture Wars and Lut
- · Benjamin Joon Utting (Department of Archaeology) 2020–22 Exploring Prehistoric Technology at the Tràng An Landscape Complex, Ninh Bình Province, Vietnam
- Maria Uvarova (Department of Archaeology) 2021–22 Water Installations at Amarna: Assessing the Role of Water in Built Environment and Ritual Practice
- Laura Van Holstein (Biological Anthropology) 2020–22 Correlated Asymmetry in Divergence
- Matthew Van Schalkwyk (Biological) Anthropology) 2020–22 The Evolutionary Context of Homo sapiens: A Palaeoecological and Palaeogeographic Approach
- · Jasmine Miria Karoliina Vieri (Department of Archaeology) 2020–22 Bayesian Regional Models of Gold and Copper Alloys from Pre-Hispanic
- Leonora Visoka Weller (Department of Archaeology) 2020–22 Conflict and Contestation of Cultural Heritage in Post-war Kosovo
- Isavella Voulgareli (Department of Archaeology) 2021–22 Gender Performativity and Heritage Discourse: The Tangible/Intangible Distinction Revisited
- Tianyi Wang (Biological Anthropology) 2020–22 Lifestyle and Intestinal Parasite Infection in Northern Europe: A Study Comparing Clergy and the General Population of Cambridge and Belgium in 12th-17th Centuries
- Simon M. Weppel (Department of Archaeology) 2020-22 Heritage Temporalities in the Context of Cultural Change: A Russian Case Study

- Andriana-Maria Xenaki (Department of *Archaeology*) 2020–22'A View from the Mountain's Top': Modelling the Use and Perception of the Mountainous Areas of Prehistoric Crete
- Keaghan Yaxley (Biological Anthropology) 2020–22 Investigating Adaptive Zone Shifts With Combined-Evidence Phylogenies
- Caterina Zaggia (Department of Archaeology) 2021–22 Plaster Production in Ancient Egypt: An Insight in the Technological Development from the Old Kingdom to the Greco-Roman Period
- Camilla Zeviani (Department of Archaeology) 2020–22 Invisible Etruscans: A Study on Etruscan Rural Settlements between the 7th and 6th Century BC
- Fang Zhai (Department of Archaeology) 2021–22 Identity-making through Post-Secular Religious Heritage in Urban Space: A Trio Case Study of Contemporary Chinese Cities of Guandong Plain Urban Agglomeration

#### **MPhil Students**

- Umar Ahmad (Department of Archaeology) 2021–22 The Effect of Urbanism on Human Health; a Mesopotamian Case Study
- Naomi Megan Allman (Department of Archaeology) 2021–22 An Investigation into how Museums Display the Concepts of Sex and Sexuality in Classical Archaeology Collections
- Denali Alexa Archer (Biological Anthropology) 2021-22 The Evolution of Genetic Immune Variation in Island Southeast Asia
- Sage Ruby Avichouser (Department of Archaeology) 2021–22 Colonizing the Past: Antiquities Legislation and Heritage Values in Mandatory Iraq
- · Oliver Edward Barlow (Department of Archaeology) 2020–21 An Investigation of the Heritage Linkages between Game Shooting and Landscape in the North York Moors National Park
- Ella Victoria Beaudoin (Department of Archaeology) 2021-22 Context is Key: Reconnecting Histories and Multi-Vocal Narratives of Samburu Ethnographic Collections Housed in European Museums
- Gaia Bedini (Department of Archaeology) 2020-21 The Voice of The Whanganui River: the Role of Heritage in Te Awa Tupua Act and its Media-
- Joshua Christopher William Bland (Department) of Archaeology) 2020–21 The Community that Wouldn't Die: Football as Post-Industrial Heritage in Accrington
- Michael Robert Bontempo (Department of Archaeology) 2021–22 Wine and Vine: The legacy of Etruscan oenology in central Italy
- Anouk Bouvet (Department of Archaeology) 2021–22 Tears, Stitches and Weave: Using Textile as Praxis for a Mending of French Heritages



- Elizabeth Yang Bouyea (Department of Archaeology) 2021–22 Historic House as Home and Tourist Attraction: Exploring Authenticity at the David Parr House and Olana State Historic Site
- Adrian Bradley (Biological Anthropology) 2021– 22 Exploring the Evolutionary Consequences of Niche Overlap between South African Hominins and Papionins
- Sarah Brakebill-Hacke (Biological Anthropology) 2021–22 Food Insecurity and Human Behavior: the Impact of Food Security on Cooperation and Conflict in Human Populations
- Benjamin Britton (Department of Archaeology) 2020–21 Forgetting the Future: Community Interaction with Post-war Public Art in Britain
- Adam Scott Burge (Department of Archaeology) 2020–21 The Legacy of Cuneiform Scholarship: Investigating the Relationship Between Cuneiform and Greek Hermeneutics
- Alexander Morgan Burling (Department of Archaeology) 2021–22 How Does Vandalism Act as a Direct Challenge to the War Narrative in Relation to Second World War Memorials?
- Anna Theresa Antonia Busuttil (Department of Archaeology) 2021–22 LOOTY: Exploring the Impact of Emerging Technology on Black Narratives of Self in the Context of Museum Restitution
- Alexandra Caimi (Department of Archaeology) 2021–22 Domestic Ceramics in the Niari Basin, Republic of Congo, 13th–15th centuries CE
- Hannah Elle Carney (Department of Archaeology) 2020–21 The Date Palm and Tamarisk in Neo-Assyrian Anti-witchcraft Texts
- Adela Cebeiro Munin (Biological Anthropology) 2021–22 Percussive Activities in Non-human Primates and the Emergence of Stone Tool Technology
- Bowen Chai (Department of Archaeology) 2021– 22 Reinventing Waterloo: The Life and Death of a Conflict Heritage
- Anna Cornelia Chapple (Department of Archaeology) 2021–22 Opposites and Alternative Narratives in the Literature and Theology of Mesopotamia
- Rosalyn Christian (Department of Archaeology) 2020–21 An Evaluation of aDNA Preservation in Bronze Age Millet from Waterlogged Contexts in the Czech Republic and Desiccated cCntexts in China
- Lauren Churchwell (Department of Archaeology) 2020–21 The Aesthetics of Third Space: Emulation and Non-Adoption of Imperial Aesthetics in Achaemenid Bactria
- Giulia Clamer (Department of Archaeology) 2021–22 The Uses and Abuses of Cultural Diplomacy: Exploring Soft Power in the Heritage Dimension. Italian–Russian Cultural Relations

- Natasha Louise Chantel Cobden (Department of Archaeology) 2021–22 Sepulchral Rites of the Ancestors: Taphonomic Analyses of Neolithic and Bronze Age Interment in Southern England
- Anders Eric Cologne (Department of Archaeology) 2021–22 Multi-Isotopic Analyses of Faunal Remains as Indicators of Livestock Management Practices at Tirefour Broch, Lismore
- Hugo Charles Angus Cook (Department of Archaeology) 2020–21 Women and Multiculturalism: the Promotion of Female Ruler-Cults in Ptolemaic Egypt.
- Braden Welsh Cordivari (Department of Archaeology) 2020–21 A Chaîne Opératoire
   Approach to Copper Production in the Niari Basin, Republic of the Congo, 15th–17th century
- Anaël Daoud (Department of Archaeology)
   2020–21 Marianne as a Lieu de Mémoire: An Intersectional Heritage Reading
- Ushni Dasgupta (Department of Archaeology) 2021–22 Landscapes and Visibility of Megalithic Sites, Central Western India
- Lowri Paige Davies (Department of Archaeology) 2021–22 Modelling the First 'Out-of-Africa' Migration of Homo erectus
- Elissa Mary Trang Day (Department of Archaeology) 2020–21 'To him everything is reported': The Vizier in 18th Dynasty Egypt
- Ines Mercedes De Larrinaga (Department of Archaeology) 2020–21 To What Extent is the Concept of the 'Middle Ground' Helpful for Understanding the Cultural Relations Between Athens and Etruria? A Case Study on Heraklean Attic Ware
- Emily Rose Deal (Department of Archaeology) 2020–21 The Impact of Location on Value-Perception: The Braybrooke Collection at Audley End, Essex, and the Museum of Archaeology and Anthropology, Cambridge
- Stefania Drakou (Department of Archaeology)
   2021–22 Is Heritage Management Policy Aligned
   with Developments in Critical Heritage Studies?
   An Exploration of UNESCO's Man and the
   Biosphere Program and the 'Culture and Nature'
   debate
- Rosamund Rachel Drew (Department of Archaeology) 2020–21 The Use of Perishable Writing Materials in the Ancient Near East, with a Focus on Sources from Ancient Mesopotamia (Modern Iraq) Dating from the First Millennium

  BCE
- Shikha Dwivedi (Department of Archaeology) 2021–22The Ship before the Wreck: An Examination of the Display of the Rooswijk Artefacts During the Festival of Archaeology from an Object-Oriented Ontological Perspective

- Mateusz Mark Dziuda (Biological Anthropology) 2021–22 The Evolutionary Genomics of Autism Spectrum Disorder
- Ffion Alice Edwards (Department of Archaeology) 2020–21 Reflecting and Producing Communities: National Museum Spaces and Narratives of Welshness in Wales, 2021
- Emily Louise Elliott (Department of Archaeology) 2021–22 Contemporary Commemoration: Heritage and Mental Health
- Rowan Stanley English (Department of Archaeology) 2020–21 Exploring Elephant Ivory Rings in Anglo-Saxon Graves
- Sanâa Estibal (Department of Archaeology) 2021–22 Heritage in Lockdown: Syrian Migrants in England and their Connection(s) to Their Heritage Before, During and After the Covid-19 Pandemic
- Elena Christine Familetto (Department of Archaeology) 2020–21 A Structure's Life and Death: A Micromorphological Analysis of a Neolithic House at Drenovac, Serbia
- Chloë Ann Fiegener (Department of Archaeology) 2021–22 Feminine Magic of Late Iron Age Norway: A Multiscalar Study of Ritual through Female Burials in Kaupang
- Emily Elizabeth Fielding (Department of Archaeology) 2021–22 Towards a Critical Engagement: Exploring the Role of the Contemporary Arts in Heritage Processes and Practices
- Yining Fu (Department of Archaeology) 2020–21
   Constitution and Reconstitution of the Identity of Dai Ethnic Minority: The Case Study of Water Splashing Festival in Yunnan Province, China
- Lydia Hildebrand Furness (Biological Anthropology) 2020–21 Signals from the Past: Assessing the Performance of Statistical Methods That Are Widely Used in the Detection of Ancient Positive Selection in the Human Genome
- Mimaansa Ghildiyal (Department of Archaeology) 2021–22 Advancing Indus Anthracology: Understanding Prehistoric Woodland Vegetation at Masudpur VII
- Esther Gillespie (Biological Anthropology)
   2020–21 Exploring Variation in Body Size and Proportions of Two Sub-Species of Chimpanzees
- Meadhbh Paula Ginnane (Department of Archaeology) 2021–22 U.S. Museums and Responses to Repatriation
- Kieran Thomas Gleave (Department of Archaeology) 2021–22 Spanner in the Works? Manchester's Northern Quarter as Everyday Industrial Heritage
- Keroline Rose Gnandt (Department of Archaeology) 2020–21 The Dog in the Night-Time: A Geospatial Study of Settlement Data from Bronze Age Central Italy



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- Haritha Govind (Department of Archaeology) 2020–21 The Tastes and Textures of Late-Medieval Maize: An Archaeology of New World Food Crops in European Culinary Practices
- Phoebe Elise Graham (Department of Archaeology) 2020–21 Remembering through Participatory Art: Memorialising the Srebrenica Genocide of 1995
- Simon Groome (Biological Anthropology) 2020– 21 The Relationship Between Mortality Salience and Fertility from a Life History Perspective
- Martha Rose Ground (Department of Archaeology) 2020–21 Trust and Tradition: The Use of Herbal Medicine as Intangible Cultural Heritage in the UK
- Isar Nikulas Gunnarsson (Biological Anthropology) 2021–22 Genetic Viscosity as an Indicator of Selection in Ancient DNA Data
- Fleur Haber (Department of Archaeology) 2020–21 Old Age in the Neo-Assyrian Period (c. 883-631 BC)
- Alexandra Rose Harris (Biological Anthropology) 2021–22 Factors Influencing Use of Human Trails in Tai Chimpanzees
- Daniel Herszberg (Department of Archaeology) 2020–21 'May Glory Reign': The Performance of Political Cultural Heritage during the 2019 Hong Kong Protests
- Georgina Hodgkins-Brown (Biological Anthropology) 2021–22 The Investigation of the Internal Bone Structure of the Fossil Phalanx StW 668 from Sterkfontein Caves (South Africa) and its Implications for Hominin Locomotion and Tool Use
- Megane Holl (Biological Anthropology) 2020–21
   Towards an Aetiology for Hyperostosis Frontalis
   Interna: A Study of Pathological Thickness
   Variation of the Diploic and Cortical Frontal
   Bones in Fossils and Extant Humans
- Alice Isabel Holliday (Department of Archaeology) 2021–22 Dead on Time? A Critical Evaluation of 'Otherness' as Experienced in North West Europe 9250 BC–AD 230
- Alexander Stephen Howson (Department of Archaeology) 2020–21 Exploring Social Norms and Exceptions Within the Nineteenth and Twentieth Century Grave Monuments of Greater Manchester
- Raffaela Iuliano (Department of Archaeology)
   2021–22 Trust and Museum: An Old Relationship Under a New Light
- Leah Rachel Jeffers (Department of Archaeology) 2021–22 A Micro-CT and Isotopic Investigation of Vitamin D Deficiency and Physiological Stress in Individuals from a Medieval Hospital in Cambridge

- Sarah Johnston (Department of Archaeology)
   2021–22 Species Identification of Organic
   Objects from the Saka and Pazyryk Cultures of
   the Great Steppe through Zooarchaeology by
   Mass Spectrometry
- Colin John Kaljee (Department of Archaeology) 2020–21 Strong Places, Weak Chronologies: Investigating the Chronology of Atlantic Roundhouses Using Radiocarbon-based Demographic Modelling
- Chaya Kasif (Department of Archaeology) 2021– 22 Re-understanding Homosexuality and the Summa Alu
- Alexandra Elizabeth Rayner Kelly (Department of Archaeology) 2020–21 Environmental Risk and Tool Complexity in the Precocious Industries of the South African MSA
- Jinoh Kim (Department of Archaeology) 2021–22
   Material and Human Agency at Heuneburg: Delicate Urbanism and Culture Contact
- Martin István Kocsis (Biological Anthropology)
   2020–21 A Cross-species Comparison of Primate Group Structure: Links Between Life History Traits and Social Organisation
- Christopher James Kotkin (Department of Archaeology) 2021–22 A Multi-Method Approach to Ceramic Analysis in Northern Mesopotamia During the Late Chalcolithic, 4th millennium BCE
- Natasha Kozlowski (Department of Archaeology) 2020–21 Soil Transformation and Landscape Evolution in Neolithic Malta: Understanding Post-depositional Change Using a Geoarchaeological Approach
- Julian Margaret Ellis Krive (Department of Archaeology) 2021–22 Practical and Theoretical Aspects of Mesopotamian Laws
- Powell Charles Le Feuvre (Department of Archaeology) 2020–21 Were the Temples of Ancient Mesopotamia Intentionally Constructed to Incorporate Astronomical Alignments?
- Carmen Ibis Lopez (Department of Archaeology) 2021–22 Issues in assessment of Mesopotamian mobility during the 2nd millennium BC
- Claudette Jazmine Lopez (Department of Archaeology) 2021–22 The Path to Minoanisation: A Consideration of Definition of Non-Cretan Peak Sanctuaries and Their Settlements Relations
- Samantha Ann Mackertich (Biological Anthropology) 2021–22 Climatic Effects on External Auditory Exostosis: A Multi-Variable Analysis
- Ruairidh Macleod (Department of Archaeology)
   2020–21 Palaeogenomics and Biological Kinship in the Mid Holocene at Lake Baikal
- Billie Renee Males (Department of Archaeology) 2020–21 Counting Sheep: Proteomic Analysis (eZooMS) of Parchment Legal Documents from Medieval East Anglia

- Hannah Debbie McKay (Biological Anthropology) 2021–22 Is Interspecific Competition for Niche Space a Selective Factor Promoting the Evolution of Tool Use in Pan?
- Tara McMaster (Department of Archaeology) 2021–22 Recontextualizing the Egyptian Material from the Royal Tombs of Byblos
- Elias Vincenzo Michel Michaut (Department of Archaeology) 2021–22 Historical Archaeology of the Freedom Villages and Landscape of Emancipation in the Hinterland of Colonial Saint-Louis, Northwestern Senegal
- Paul Minhoff (Department of Archaeology) 2021– 22 Does the Use of Aerosolised Scanning Spray Enhance 3D Models of Difficult-to-scan Artefacts to a Research Grade?
- Laura Mitchell (Department of Archaeology) 2020–21 The Importance of Private Religion to Amarna's Workers: An Analysis of Material Culture Remains from Houses and Chapels
- Eliza Céline Morris (Department of Archaeology) 2021–22 At the Intersection of Art and Cultural Heritage: Rediscovering the Art(efact)
- Taha Mughal (Department of Archaeology) 2021– 22 Can Architectural Restoration Resuscitate a Building as a 'Place of Memory'?
- Emma Naveah (Department of Archaeology) 2020–21 To What Extent Was Mental III-health Experienced and Understood During the Neo-Assyrian Period?
- Jieyu Ni (Department of Archaeology) 2020–21 'Reluctant Inheritors': Challenges in the transmission of Chinese Peasant Painting
- Ioannis Oikonomou (Department of Archaeology) 2020–21 Tracing Human Activities in a Neolithic Lakeside Settlement: Contextual Micromorphology of Archaeological Deposits from Dispilio, Greece
- Flora Lucy Campbell Outram (Department of Archaeology) 2021–22 (How) do Inuit Throat Singers Use TikTok as a Social Medium to Communicate Their Intangible Cultural Heritage in Accordance with Inuit Worldviews?
- Anna Frances Pearson (Department of Archaeology) 2020–21 Applying International Relations Theory: A New Approach Towards the Political Dynamic of Egypt's First Intermediate Period
- Bruna Pelgrin I Garcia (Department of Archaeology) 2021–22 Iberian Peninsula Metallurgy
- Yinying Peng (Department of Archaeology) 2020– 21 Enchanted Heritage in a Space of Confucian Learning: A Case Study of the Yuelu Academy
- Enrica Simona Pitzalis (Department of Archaeology) 2021–22 ZooMS and Isotopic Analysis on Faunal Remains from Sant'Aniceto (Italy): Insights into Herd Management in South Calabria during the Bronze Age



- Matilde Quilici (Department of Archaeology)
   2020–21 The Technology of Torba Floors in the Maltese Islands
- Natasha Jasmine Kaur Rai (Department of Archaeology) 2020–21 The Egyptian Question: Defining an Entangled, Transcultural Dimension to Identities at First Intermediate Period Cemeteries
- Isabel Ricketts (Department of Archaeology) 2021–22 Memory in Motion: Exploring the Development of COVID Memorials in the UK and Their Impact on Collective Memory of the Pandemic
- Jessica Jean Riley (Department of Archaeology) 2021–22 Through the Virtual Glass: Replicas and Authenticity
- Ginevra Rollo (Department of Archaeology) 2020–21 Traditional Crafts Through a Gendered Lens: Glassmaking, Lacemaking, and Gendered Constructions of Heritage
- Kelsi Alice Gallagher Russell (Department of Archaeology) 2020–21 How Did Cultural Memory Act as a Catalyst in the Theban Revolts (206–185 BCE)?
- Mairead Monica Ryan (Department of Archaeology) 2020–21 The Geometry of Symmetry: An Element of Style in Mesopotamian Textiles and Ceramics
- Alexander Armstrong Salikan (Biological Anthropology) 2020–21 Just Another Ape? Our Miocene Ancestors in the Context of Hominoid Evolution
- Morgan Wickham Galwey Sapsford (Department of Archaeology) 2021–22 Lasting Impressions; Re-emphasising Shared Emotion in Archaeological ilnterpretation, A Study of Ancient Maya Art and Material Culture
- Rosie Schofield (Department of Archaeology) 2021–22 This Green and Pleasant Land: Examining the Construction of British Pastoral Narratives, in the Context of the Vegan Diet as Climate Change Action
- Olivia Seifert (Biological Anthropology) 2020–21 Is There Evidence That Sexual Selection on Skin Pigmentation Has Impacted Allelic Frequencies of the SLC24A5 Gene Across Indian Castes?
- Mariam Shakhmuradyan (Department of Archaeology) 2021–22 The Armenian Itsagir: A New Perspective on the Origins of Egyptian and Mesopotamian Writings
- Qihao (Benny) Shen (Department of Archaeology) 2021–22 Assessing the Archaeology of Apiculture in Light of Indigenous East African Beekeeping
- Jared Milo Juryi Tshai Shiffert (Biological Anthropology) 2021–22 Assessing the Age at Death, Dental Developmental Pattern and Taxonomic Status of a Limnopithecus Mandible (KNM-SO 22735) from Songhor Using Synchrotron Data

- William Silcox (Biological Anthropology) 2020–21 Does the Size and Organization of the Insular Cortex Predict Social Behaviour in Pan?
- Daniel Fabricius Simonsen (Biological Anthropology) 2020–21 'An Evolutionary Investigation Into the Relationship Between Schizotypy and Language in a Non-clinical Population.
- Eloise Megan Sinclair (Department of Archaeology) 2021–22 Towards a Heritage of Prostitution
- Amanda Christine Aurora Sky (Department of Archaeology) 2021–22 Foraging, Folklore and the Feminine
- Yu Song (Department of Archaeology) 2020–21
   Gifts at Ebla: The Nature and Networks of Gift Exchange From the Late Third to Early Second Millennium BC
- Kate Starkey (Department of Archaeology) 2020– 21 Re-politicising the Emotions of Coal-mining Heritage: The Case of West Cumbria Mining
- Katerina Stodolová (Department of Archaeology) 2021–22 Provenance and Manufacturing Technology of Roman Iron Nails from Aldborough, Yorkshire, UK
- Madeleine Strait (Department of Archaeology) 2021–22 (Mi)lieu de Mémoire: An Interdisciplinary Approach to Heritage and Linguistic Ontologies
- Mustakim Habibu Sulaiman (Department of Archaeology) 2021–22 Archaemetallurgical Studies of Recent Metal Objects from Igboukwu Site, Southeastern Nigeria
- Liam Taylor (Biological Anthropology) 2020–21 The Effects of Individuals' God Concepts on Altruistic Behaviour
- Lindsay Morgan Taylor (Department of Archaeology) 2020–21 Catharsis in the Heritagisation Process of Coventry's Post-war Urban Landscape
- Ino Terzi (Department of Archaeology) 2020–21 The Heritage and Foreign Policy of International Exhibitions: A Case Study of EXPO 2020 Dubai
- Melissa Eilidh Thomas (Department of Archaeology) 2020–21 Landscapes of Ruins: The Affects of Living with Remains of the Past
- Phoebe Jane Thompson (Department of Archaeology) 2020–21 Examining Site Construction and Use at the Etruscan Settlement of Col di Marzo Through Soil Micromorphological Analysis
- Benjamin Townsend (Department of Archaeology) 2020–21 How Were the Mušhuššu and Other Offspring of the Goddess Ti'amat Domesticated in Ancient Mesopotamia?
- Georgia Hunter Vance (Department of Archaeology) 2020–21 Hittite Ritual Pits? An Interdisciplinary Approach to the Ontology and Agency of Place in Hittite Sacred Landscapes

- Duncan Mark Walter (Department of Archaeology) 2021–22 The Methods of Legitimisation of a Ruler of Mesopotamia in the Late 3rd and 2nd Millennium BCE
- Biyang Wang (Department of Archaeology) 2021–22 Compositional Analysis on 'Iron' Slag from Tamdult, Africa
- Alexandra Warminski (Department of Archaeology) 2020–21 The Role of Digitization in Syrian Heritage Preservation and Reconstruction
- Grace Olivia Watson (Department of Archaeology) 2020–21 The Role of Color, Object, and Substance in Nonverbal Communication Among Neanderthals in Eurasia
- Eleanor Mary Williams (Department of Archaeology) 2021–22 How Were the Lives of Homo erectus Living in the East African Rift Valley Affected by Their Proximity to Local Volcanic Eruptions?
- Marina Wondrich-Rush (Department of Archaeology) 2020–21 The Political Economy of Plaque Production in Old Babylonian Mesopotamia
- Clara McCafferty Wright (Department of Archaeology) 2021–22 Reconsidering Cleopatra VII: The Lost Narrative of Egypt's Last Queen
- Fei Yang (Department of Archaeology) 2020–21
   Palaeoecology of the Mesolithic Hunters and Their Game in the Northern Iberia: A Stable Isotopic Study on Terrestrial Mammals from El Mazo
- Miao Yang (Department of Archaeology) 2021–22 Heritage and Education
- Lingran Zhang (Department of Archaeology) 2021–22 The Impact of Glass Case on Museum Visitors



#### **Archaeological Science Laboratories**

MARCOS MARTINÓN-TORRES

The Laboratories for Archaeological Science and Biological Anthropology at the University of Cambridge offer stateof-the-art resources for the integrated analytical study of inorganic and organic materials to reconstruct landscapes, technology, mobility, domestication, diet, human evolution and cultural transmission, and the use of computational methods to model and analyse data at all scales. We run facilities for preparation and analysis of archaeological, anthropological and environmental materials for macroand microstructural examination (2D and 3D), chemical and isotopic composition, ancient DNA and protein extraction, as well as high-performance computing. Our vision is the integrated use of relevant scientific methods to enrich archaeological, bioanthropological and palaeoanthropological research, crossing divides between organic and inorganic specializations and upholding the highest standards of scientific practice. Distributed across the department, the laboratory facilities we run span almost 700 square metres, but of course it is the people working in them, and their research, that matters the most.

#### The Cambridge Heritage Science Hub (CHERISH)

CHERISH is a collaborative programme that brings together several teams with overlapping interests in archaeological science, heritage science and technical art history. These are based at the Department of Archaeology and the McDonald Institute, but also at the Fitzwilliam Museum with its Hamilton Kerr Institute, the University Library and the Museum of Archaeology and Anthropology. At the core of this initiative is our conviction that scientific approaches are key to the characterization, preservation, understanding and dissemination of heritage, but also that these studies should be grounded in the broader intellectual frameworks of the arts and humanities, in order to maximize benefits to communities, economies and the environment. We promote a critical approach to archaeological and heritage science that is both robust in its scientific foundations and humanistic in its engagement with artefacts, people and their multifaceted cultural and natural contexts.

In late 2020, CHERISH received a massive boost in the form of a £3M grant from the Arts and Humanities Research Council, as part of the UK government's World Class Labs funding scheme to upgrade and refurbish leading laboratories. Winning this grant, and then delivering on our promises, both required Herculean efforts—but we are already enjoying the benefits. Besides upgrading our sample preparation facilities for biogenic and non-biogenic materials, the archaeology labs now have a range of new instruments including a Zeiss Evo 25 scanning electron microscope with a large chamber and a very sensitive energy dispersive spectrometer, a second Olympus Vanta portable X-ray fluorescence spectrometer to cope with



#### CHERISH infograph designed by Rafaella Losito.

our growing demand, a Bruker Skyscan 1273 micro CT scanner, and new hardware for 3D scanning and photogrammetry. More importantly, we have formalized our collaboration with our *CHERISH* partners through an equipment-sharing agreement that ensures we have access to further facilities such as hyperspectral imaging, reflectance transformation imaging, micro XRF mapping, UV-Vis-NIR and Raman spectroscopy, and many more. Many of these instruments are portable, allowing us to take them to sites and museums, and continuing to blur the boundaries between field and lab archaeology. The shared instruments keep triggering very fertile interactions and unexpected ideas.

The timing of the CHERISH upgrade could not have been more fitting, as it made another feat possible: the 'Gold of the Great Steppe' exhibition and the scientific research that was carried out in parallel. This blockbuster show, held at the Fitzwilliam Museum and widely acknowledged as one of the top exhibitions of 2021, was curated by an archaeological scientist (Rebecca Roberts) with the assistance of another (Saltanat Amirova), in collaboration with many others in the UK and Kazakhstan. In an unprecedented and very complex arrangement, Saltanat led the scientific analyses of most of the artefacts on display, removing them from showcases when the exhibition was closed and putting them back there before anyone noticed. Hundreds of gold items were analysed, but we also carried out proteomic analyses of bone artefacts and the identification of phytoliths in stone tools—in keeping with our commitment to integrate research on organic and inorganic materials. UK Research and Innovation chose to highlight this work as an example of the immediate impact of their investment.

#### **New projects**

It is impossible to list here all the research projects engaging archaeological and bioanthropological



science, and we encourage interested readers to check our website for further details. We list several projects funded by the European Research Council that were awarded or started during our reporting period, to illustrate the breadth of what we do.

- Making ancestors: the politics of death in prehistoric Europe (ANCESTORS), led by John Robb, aims to test alternative models of prehistoric inequality using osteobiography.
- Reverse engineering collective action: complex technologies in stateless societies (*REVERSEACTION*), led by Marcos Martinón-Torres, investigates the development and sustainability of luxury technologies in societies without coercive authorities.
- Movement networks and genetic evolution among tropical hunter-gatherers of island Southeast Asia (MOBILE), led by Guy Jacobs, investigates changes in health and biological diversity resulting from the interaction between hunter-gatherers and agricultural societies.
- The evolutionary landscape of modern human origins in Africa (*NG'IPALAJEM*), led by Marta Mirazón Lahr, explores links between climate and evolution in East Africa.

These are in addition to further ongoing ERC-funded projects on which we have reported previously, namely *Beasts to Craft* and *ENCOUNTER*. The number of ERC projects running in parallel is unmatched, and we take it as an indication of the international strength of our community.

#### New people

The above grants and others have allowed us to welcome new people, including Marie Skłodowska-Curie Fellows Edgard Camarós (researching traumatic mortality in prehistoric humans), Alfredo Cortell-Nicolau (modelling the spread of the Neolithic) and Julia Tejada (investigating isotopic variability in fossils and ecosystems in Amazonia), as well as Newton International Fellow Daniel Fuks (dung microbiomes in the Negev desert). Monica Ramsey obtained a Leverhulme Fellowship to extend her research on anthropogenic wetlands in the Levant. Agnese Benzonelli and Rosie Crawford joined us as team members of the *REVERSEACTION* project, investigating metals, lithics and ceramics in Colombia; Chris Stephens and Simon Carrignon joined the *ENCOUNTERS* team as specialists in archaeobotany and computer modelling, respectively.

As always, our community was enriched by new PhD students. Some of them are Elizabeth La Duc (use of coal in Roman iron metallurgy), Andriana Xenaki (modelling use of mountainous areas in prehistoric Crete), Saltanat Amir (Saka goldsmithing in Kazakhstan), Selene Mazza (humananimal relations in the Viking world), Sophie Rabinow (biomolecular analyses of cesspits), Taylor Peacock (sex/gender classifications), Ismael Rodríguez-Palomo (proteins in ceramics) and Caterina Zaggia (pastes in Egyptian coffins). The last two joined us as part of PlaCe, a new Innovative Training

Network awarded €3.9M by Europe's Horizon 2020, which will enable training and knowledge transfer among a new generation of archaeological scientists in Europe.

#### In the lab and in the field

The Pitt-Rivers Laboratory and the Glyn Daniel Laboratory saw the usual mixture of researchers using a variety of optical and electron microscopes to study materials spanning South American goldwork (Agnese Benzonelli), food remains from Australia (Anna Florin), iron slag from Britain (Elizabeth La Duc), ceramics from Norway (Rosie Crawford) and Central Asia (Carmen Ting), Egyptian coffins (Caterina Zaggia), dung pellets from Israel (Daniel Fuks and Chiara Belli), lithic artefacts from Spain (Andreu Ollé and Alastair Key), and a great deal more. Some of these and other materials were then further processed for elemental, isotopic, genomic or proteomic analyses at the Dorothy Garrod Laboratory for Isotopic Analysis and the Henry Wellcome Laboratory for Biomolecular Archaeology.

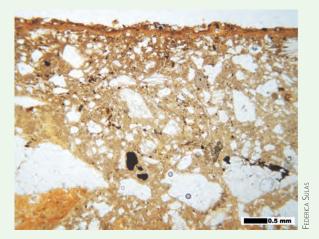
Straddling the above and the **Grahame Clark Laboratory for Zooarchaeology**, Alette Blom investigated zoonosis between squirrels and humans for leprosy, while Emily Tilby studied the microfauna from Shanidar cave. Marjolein Bosch contributed as specialist zooarchaeologist in the *TransEvol* project at the Turkana Basin. Ruairidh Macleod used ZooMS to show that, contrary to widespread belief, early medieval 'Daneskins' were made of animal rather than human skin.

As always, the Henry Wellcome Laboratory for Biomolecular Archaeology received numerous visiting researchers, including Youri van der Hurk from the Norwegian University of Science and Technology, who identified animal remains using ZooMS; Anna Spyrou from the Cyprus Institute, who carried out both proteomic and isotopic analyses; and Bing Wang, from Zhejiang Sci-Tech University, who is working with us on the development of new immunological and proteomic technologies. Matthew Teasdale and Sarah Fiddyment developed further their collaborations with the University Library, Fitzwilliam Museum and Corpus Christi College to conduct an omics analysis of a range of parchment manuscripts, with the aim of understanding their production and conservation. Some of these datasets are being further processed by Ismael Rodríguez-Palomo, who is developing new computational methods to analyse large ZooMS datasets.

Researchers at the Charles McBurney Laboratory for Geoarchaeology were busy both in the lab and in the field. Charly French, Tonko Rajkovaca and Petros Chatzimpaloglou identified the chert sources of Palaeolithic assemblages from north Bosnia i Herzegovina, and completed a long-term project on landscape change



and material culture sourcing at Neolithic Drenovac. Micromorphological and geochemical analyses of earthen (*daga*) building remains from Great Zimbabwe by Federica Sulas revealed their complex construction methods. Kyra Kaercher used petrography and FTIR to investigate Middle Islamic ceramics.



Microphotograph of earthen (daga) floor material from Great Zimbabwe seen in thin section.

Meanwhile, Tonko Rajkovaca's thin-sectioning repertoire has continued to grow, recently including soils, slag, metalwork, lithics, rocks, archaeological bones, modern knee-joint replacements and even a slice of Pavlova dessert for an art exhibition and cookbook! The whole collection of thin sections produced at the McBurney Lab since 1979 has been scanned and will soon be uploaded to the Archaeological Data Service, providing a rich resource for future generations of geoarchaeologists.

Researchers in the Computational and Digital Archaeology Laboratory have continued to release open-source software packages for archaeological applications. We recently saw two new releases on the comprehensive R archive network: nimbleCarbon for Bayesian modelling of radiocarbon dates (by Enrico Crema) and leastcostpath for modelling pathways and movement (by Joseph Lewis).

An almost permanent feature of the Palaeoanthropology Lab was Lucía López-Polín, meticulously working on the reconstruction of a Neanderthal skull from the fragments recovered at Shanidar. The space has also seen much activity on both 3D and CT scanning of all kinds of materials, which have kept Peppe Castelli very busy. These have included brain endocasts and various other human and animal remains, but also ceramics, flint and wood artefacts, and even ostrich eggshell beads. Some of these scans have also been rendered as physical 3D prints for further examination and teaching, including flint tools from several British sites (Alastair Key), endocasts and



Digital models of lithic artefacts used for shape analysis.



3D print of the child cranium from El Pendo Cave (Cantabria, Spain).

brains (Amélie Beaudet) and various fossil crania showing pathologies (Edgard Camarós).

Finally, Emma Pomeroy took over the directorship of the **Duckworth Collection** and the associated laboratory, after two decades of dedicated service by Marta Mirazón Lahr. Many volunteers contributed to a very successful human remains reboxing project, and a new collections database has been created with support by the McDonald Institute and the Department of Archaeology.

#### **Exchanging knowledge**

Cambridge archaeological scientists were very active in the conference circuit, and our award-winning students made us very proud. There was a large cohort of our materials scientists at the International Symposium on Archaeometry in Lisbon, where Julia Montes-Landa scooped the award for the best poster given by the Society for Archaeological Sciences. We were also very well represented by our biomolecular archaeologists at the UK Archaeological Science conference in Aberdeen, and by archaeometallurgists at the Embers 2021 conference in Oxford.

Joseph Lewis ran two sessions on movement in archaeology at larger conferences: one at the European

Association of Archaeologists conference in Budapest, and another one at the Computer Applications in Archaeology conference in Oxford; at the latter conference, his paper was awarded the Nick Ryan Award.

In Cambridge, and supported by a grant from the McDonald Institute, Daniel Fuks organized a remarkably well-attended international workshop on agricultural crop migrations in the first-millennium ce Middle East and Mediterranean.

We also contributed to knowledge transfer by delivering training abroad. For example, Petros Chatzimpaloglou, Charly French and Gianbattista Marras offered a geoarchaeology field course in Croatia for the HERISTEM Erasmus+ project, and Federica Sulas ran geoarchaeological field training for local archaeology undergraduates and heritage staff in northern Zanzibar and central Zambia. A large number of us contributed to multiple training courses in archaeological science, in both Cambridge and Cyprus, as part of the Horizon 2020 Widening support project PROMISED.

#### Awards and medals

We share our laboratories with visionary colleagues who are always generous with their ideas and their time, and are particularly pleased when their talents are also recognized beyond our walls. Two of our archaeological scientists have received highly prestigious awards—they could not be more deserved, and we could not be prouder.

Matthew Collins received the Pomerance Award for Scientific Contributions to Archaeology from the Archaeological Institute of America, in recognition of the fact that he largely established the important field of



Some Cambridge delegates at the International Archaeometry Symposium in Lisbon (from left: Lina Campos, Carmen Ting, Elizabeth La Duc, Jasmine Vieri and Mark Davis).



Prof. Charly French (left) receives the 2022 Landscape Archaeology medal from Martin Bell.

palaeoproteomics, and of his boundless energy and creativity for nurturing new ideas.

Charly French was awarded the Landscape Archaeology Medal from the British Academy in recognition of a lifetime of innovative and cutting-edge work and global-reaching research in geoarchaeology, and his inclusive approach to teamwork.

Both awards explicitly commended Matthew and Charly's commitment to encouraging and facilitating the advancement of early career scholars, and we especially salute them for that.

#### **Graduations and farewells**

We take our hats off to PhD students who managed to graduate in extraordinarily challenging pandemic times. Our warmest congratulations to Sam Leggett, Dylan Gaffney, David Kay, Malcolm Connolly, Jeremy Bennett, Mike Lewis, Kyra Kaercher, Huiru Lian and Emily Tilby. We owe very special mentions to Sam and Dylan because they have already secured lectureships in Edinburgh and Oxford, respectively—no small feat! Also, farewell and congratulations to postdoctoral leavers, including Adam Green, Alessio Veneziano, Marc Gener-Moret and Peter Schauer, who have moved on to other jobs. We will miss all of them, but are very pleased to see them succeeding.

The most notable departures, however, are those of more senior colleagues who retired in this period: Charly French, Preston Miracle and Rob Foley. We are very conscious that we walk in their footsteps, and our international reputations in geoarchaeology, zooarchaeology and evolutionary anthropology owe a great deal to their contributions—but it is their collegiality, mentorship and wisdom that we will miss the most. There is every indication that their retirements are only a formality, and we look forward to continuing to pick their brains and witness their discoveries.

#### **DM McDonald Grants and Awards**

The Institute supports field projects and other research initiatives of the University of Cambridge archaeologists through its annual grants from the DM McDonald Grants and Awards Fund. In 2020 Grants totalling over £28,000 for fieldwork were awarded and two £10,000 Conference grants: Dr Daniel Fuks for 'Eurasian Crop Diffusion in the First Millennium ct' and Dr Nik Petek-Sargeant for 'Symbols in Action at 40: Baringo and Beyond'. In 2022 £56,449 (£55,449 for fieldwork and £1000 for conferences) was awarded. As a result of Covid-19 restrictions, out of the 35 grants that were awarded two recipients needed to return their money and several extensions were granted.

#### Projects 2020-21

#### Trisha Biers

Conquest and Colonial Pathogens: Indigenous response and resistance in Peru, Part I

#### · Marcus Brittain

Application of Inter-Science Drone Data to Heritage Research at South Georgia Island

#### • Anastasia Christophilopoulou

West Area of Samos Archaeological Project (WASAP)

#### Christopher Evans

Excavations at Barleycroft Farm, Over

#### • Nicholas Postgate

Preparing city plan of Abu Salabikh for final publication

#### Monica Ramsey

Deep Origins: Al deep learning ID of plant phytoliths for the origins of agriculture

#### Christiana Scheib

Was Plague an Indiscriminate Killer? Developing a metabolomics assessment

#### · Federica Sulas

Depositional Histories at Igbo Ukwu, Southeast Nigeria

#### Carmen Ting

The Making of Islamic Glazes: From the Silk Road to al-Andalus

#### • Christina Tsouroupoulou

The 2002 Excavation Season at Tell al-Wilaya, Iraq. Book project, 'Tell al-Wilaya: Report of the 2002 excavation season'

#### Projects 2021-22

#### · Emily Banfield

Domesday for West Kennett

#### Graeme Barker

Shanidar Cave Project: the 'Shanidar Z' Neanderthal

#### Amelie Beaudet

Tracking Evolutionary Changes in the Human Brain

#### Agnese Benzonelli

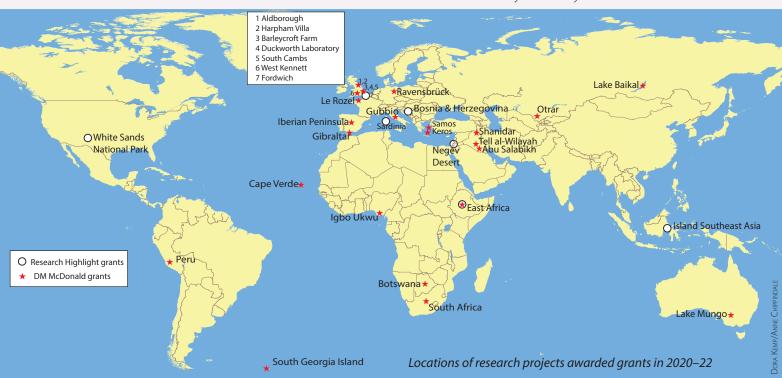
The Sheen of Corinthian Bronze: Archaeology sheds new light

#### • Thomas Boehmer

The Harpham Villa Landscape Project

#### Michael Boyd

The Keros-Naxos Seaways and the Origins of Cult at the Kavos Sanctuary: Final study season



#### Katie Campbell

Silk Road Cities: Excavation at Otrar (Kazakhstan)

#### Gilly Carr

Archaeological Research at the Former Women's Concentration Camp of Ravensbrück, Brandenburg, Germany

#### · Alfredo Cortell-Nicolau

Pioneers or Yeomen? Analysis of migratory dynamics of the first agricultural groups in the Iberian peninsula

#### · Anna Florin

Freshwater Plant Foods on the Edge of the Australian Arid Zone at Lake Mungo, Willandra Lakes Region World Heritage Area

#### · Liliana Janik

Connecting the Landscape: Materiality of substance

#### Martin Jones

The Two Buckwheats

#### • Sylvain Lemoine

Assessing the Research Importance and Potential of the Gibraltar Barbary Macaques Population

#### Marcos Martinón-Torres

Archaeological Science in East Kazakhstan: Research and education

#### · Stephania Merlo

Contextualising a Tswana Megasite: The archaeology of Seoke, a Bangwaketse eighteenth-century capital

#### Martin Millett

Aldborough Roman Town Excavation 2022

#### • Nik Petek-Sargeant

Historical East African Archaeology and Theory: A framework for historical archaeology and identity formation

#### **Research Grants**

#### Dr Edgard Camarós

Traumobita: The role of traumatic mortality in late human evolution from an integrated non-invasive bioarchaeological and taphonomic perspective (EC H2020 MSC Fellowship)

#### • Dr Katie Campbell

Silk Road Cities: Survey at Otrar, Kazakhstan (British Academy)

#### • Prof. Matthew Collins

Analysis of Ancient DNA from Mid-Holocene Humans at Lake Baikal Region, Siberia: Population history, ecology and adaptation

(University of Copenhagen – FB Novo Nordisk Foundation)

#### • Prof. Matthew Collins

C-CLEAR: Cambridge Climate, Life and Earth sciences DTP (NERC)

#### • Emma Pomeroy

Seed funding for the development of a collections database for the Duckworth Laboratory

#### Simon Stoddart

Gubbio Revisited

#### Jess Thompson

Osteobiographies of a Double Burial at the West Kennet Palisades

#### · Dacia Viejo Rose

(HEIA) Heritage Ecosystem Impact Assessment: Pilot Study for Implementing an Innovative Tool and Analytic Method in South Cambridgeshire

#### AshleighWiseman

The rock shelter site of Le Rozel: Neanderthal trace fossils and the possibility of footwear

#### Conferences

#### Simon Stoddart

Monumental landscapes of the Mediterranean: a Sardinian perspective

#### £10,000 Conference awards

#### 2020-2021

#### Daniel Fuks

Eurasian crop diffusion in the first millennium CE

#### 2021-2022

#### • Nik Petek-Sargeant

Symbols in Action at 40: Baringo and Beyond

#### • Dr Alfredo Cortell-Nicolau

Agent-Based Modelling to assess the quality and bias of the archaeological record (EC H2020 MSC Fellowship)

#### • Dr Kingsley Daraojima

Social Settlement Dynamics and Environmental Process in Pre-colonial Nigeria: Growing the Igbo-Ukwu urban/cultural landscape

(BA Newton International Fellowship)

#### • Dr Ryan Espersen

No Dollar Too Dark (EC H2020 MSC Fellowship)

#### • Prof. Robert Foley

PALAEOANALYTICS: Using data science and machine learning to develop cross-disciplinary analytical methods in human evolutionary studies (Alan Turing Institute)



#### • Prof. Charles French

Provenance Investigations of Stone Tools in Prehistoric Serbia and Bosnia I Herzegovina (Isaac Newton Trust)

#### Dr Daniel Fuks

The Flowering Desert: First millennium CE agricultural developments in the Negev desert reconstructed from dung microbiomes and rubbish-dump plant remains (BA Newton International Fellowship)

#### · Dr Guy Jacobs

Movement Networks and Genetic Evolution among Tropical Hunter-gatherers of Island Southeast Asia (EC H2020 ERC Starting)

#### Dr Liliana Janik/Dr Oscar Aldred

Landscape Regeneration Solutions to the Interlinked Extinction and Climate Crises that support Sustainable Development (NERC)

#### • Dr Alastair Key

An Open Access Database Detailing the Comparative Sharpness and Cutting Performance of Raw Materials Used to Produce Palaeolithic Stone Tools (Royal Society)

#### • Dr Alastair Key

Rescue Excavations at Britain's Earliest Acheulean Site: Fordwich and Old Park 2022–2023 (The Leakey Foundation)

#### • Prof. Marta Mirazon Lahr

The evolutionary landscape of modern human origins in Africa (NGIPALAJEM)
(EC H2020 ERC Advanced)

#### • Prof. Paul Lane

Rising from the Depths: Utilising marine cultural heritage in East Africa to help develop sustainable social, economic and cultural benefits (University of Edinburgh – FB AHRC)

#### Dr Alex Loktionov

The Development of Early Constitutional Thought (AHRC)

#### • Prof. Marcos Martinón-Torres

Brass vs Bronze: continuity and change from Late Antiquity to the early Islamic (AHRC)

#### • Prof. Marcos Martinón-Torres

Cambridge Heritage Science Hub (CHERISH): infrastructure for research in material culture and collections (AHRC)

#### • Prof. Marcos Martinón-Torres

Reverse Engineering Collective Action: Complex technologies in stateless societies (EC H2020 ERC Advanced)

#### • Prof. Marcos Martinón-Torres

Training the next generation of archaeological scientists PLACE (EC H2020 MSC ITN)

#### • Dr Stefania Merlo

Digital Storytelling on African Urbanisms: A model to empower education initiatives across the global south (AHRC)

#### • Dr Nik Petek-Sargeant

Historical East African Archaeology and Theory: A framework for historical archaeology and identity formation (British Academy; EC H2020 MSC Fellowship)

#### • Dr Cameron Petrie

Mapping Archaeology While Mapping an Empire (British Institute of Persian Studies)

#### • Dr Emma Pomeroy

From this world to the next: novel perspectives on Neanderthal death

(Templeton Foundation)

#### • Prof. John Robb

Making Ancestors: The politics of death in prehistoric Europe (EC H2020 ERC Advanced)

#### • Dr Christiana Scheib

Development of an Ancient Pregnancy Test Using Paleoproteomics (British Academy)

#### • Dr Rihlat Said Mohamed

iMapNut: Machine learning to map and address causal factors of child malnutrition in low- and middle-income countries (Academy of Medical Sciences)

#### • Dr Rihlat Said Mohamed

Life History Theory in Maternal and Child Health: Formative research in South Africa (Wellcome Trust)

#### • Dr Julia Tejada Lara

Evolution on an Island Continent: Feeding ecology of Pleistocene sloths (EC H2020 MSC Fellowship)

#### • Dr Carmen Ting

The Glaze is Less Opaque on the Other Side: Rethinking the role of the Levant in the emergence of Islamic glaze production (Council for British Research in the Levant)

#### • Dr Ashleigh Wiseman

Early American Colonisation: Life on the White Sands National Park playa in the Pleistocene (British Academy)

#### · Dr Ashleigh Wiseman

How to Build a Hominin: Predictive simulations of locomotion in human evolution
(Leverhulme Early Career/Isaac Newton Trust)

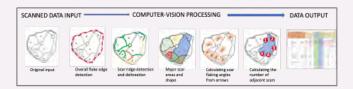


#### Palaeoanalytics: Using Data Science to **Automate Lithic Analysis**

ROBERT FOLEY, JASON GELLIS & CAMILA RANGEL SMITH

Anyone who has analysed a stone tool assemblage will know that it is a time-consuming process. So too is analysing fossils, but where fossils are few and far between, lithics can number in the thousands or tens of thousands. While this makes them a wonderful source of information about the technology and behaviour of prehistoric hominins, it is also a daunting task. With a grant from the Alan Turing Institute, the UK's leading data science and AI research centre, the *Palaeoanalytics* Project has been developing an open-source computer-visionbased machine learning software package—PyLithics that automates data capture for lithic flakes. The software can identify and measure the overall shape and size of a flake, as well as all the scars and ridges on the dorsal surface. The original inputs are scanned line drawings. Approximately 50 lithics can be processed in a minute, an advance on conventional methods.

The aim of the project is to enhance the scale and quantity of lithic data. For example, one of the key sources of information is the number, sizes and flaking directions of dorsal scars, and these can all be calculated with great accuracy and instantly with PyLithics, allowing us to calculate entirely new parameters such as the variance in flake scar shape, or patterns of symmetry. Given the scale of the lithic record, PyLithics opens up a data science potential for retrieving information about hominin behaviour from their stone technology.



From stone tool line drawing to metric data—the workflow of PyLithics. To get the software, go to: https://github.com/alan-turing-institute/ **Palaeoanalytics** 

#### How to Build a Hominin

ASHLEIGH L. WISEMAN

This is a three-year project, funded by a Leverhulme ECF (Dr Ashleigh L. Wiseman), which started in October 2021. This project investigates how hominins moved by reconstructing soft tissues of the lower limbs and computing predictive simulations. To accomplish such a task, a hominin fossil needs to be digitally reconstructed, joints have to be rearticulated, soft tissues must be recreated, muscle parameters must be estimated and the resultant hominin can then be animated by movement: after which muscle action, function and capability can be extracted and we can begin to unravel how the hominin might have moved.

Preliminary results of this project have produced estimates of cartilage thickness in the Australopithecus afarensis specimen AL 288-1's hip joint, permitting range of motion analyses and also for more accurate pelvic reconstructions to be made. These results have indicated that AL 288-1 had hip-joint spacing which was human-like, although osteological mobility in the hip was in line with both humans and chimpanzees. Soft-tissue constraints have limited such mobility, and digital soft-tissue reconstructions have indicated similar capability of limb musculature to a human. Both sets of results have produced interesting results, the first of which was published this summer (2022), with the next set of results due for publication shortly. The results of this project will continue to provide new insights into how best to create a musculo-skeletal model of an extinct species, and also how such a species walked, ran and jumped. To keep up to date with this research, see:

https://walkinginthepast.co.uk/

This work was supported by a Leverhulme Trust Early Career Fellowship (grant number: ECF-2021-054) and by the Isaac Newton Trust, University of Cambridge.



Digital reconstructions of the musculature of the AL 288-1 specimen.



## *REVERSEACTION* Investigates Pre-Hispanic Technologies at Nueva Esperanza, Colombia

Marcos Martinón-Torres, Agnese Benzonelli, Lina Campos Quintero, María Alicia Uribe Villegas, Sebastián Rivas Estrada, Joaquin Otero Santili án & Garriel Calderón

People of all kinds can collaborate voluntarily on collective and ambitious goals. Archaeological evidence demonstrates that societies without kings or emperors could produce and enjoy non-utilitarian, 'luxury' technologies such as specta-cular goldwork, sophisticated textiles, ornate ceramics, or exotic stones. But how can these complex technological systems be sustained in the absence of coercive political administrations? How to ensure the availability of rare materials and specialized skills? The project Reverse engineering collective action: complex technologies in stateless societies (REVERSEACTION) is addressing these questions. We are employing archaeological science methods in collaboration with environmental studies, anthropology, sociology, management studies and crafts, to provide new perspectives on collective action.

Colombia is one of our key regions of interest, and we are delighted to have started work at the pre-Hispanic site of Nueva Esperanza. Widely regarded as the greatest archaeological discovery of Colombia in recent decades, this is a huge village in a terrace near the spectacular waterfall of Tequendama, providing evidence of life and death over a 2000-year span until European contact. We have started analysis of the tonnes of material culture associated with houses and burials, with special emphasis on gold and textile production. While some of us try to understand how these technologies were sustained during centuries, other specialists are focusing on anthropological and biomolecular analyses. This will hopefully lead to the largest integrated study of its kind. It is not surprising that we need to cooperate today in order to understand cooperation in the past.

This project has received funding from the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation programme (Grant agreement No. 101021480). You can find out more at: www.reverseaction.org



From left, Sebastián Rivas, Agnese Benzonelli and Marcos Martinón-Torres at the Museo Arqueológico Nueva Esperanza.

#### Alcatrazes, Santiago Island, Cape Verde

CHRISTOPHER EVANS AND MARIE LOUISE STIG SØRENSEN

2022 saw further work (funded by the McDonald Institute and local government bodies) at Alcatrazes, the island's second Portuguese foundation settlement and its short-lived northern governing captaincy, whose actual location we only discovered in 2011. With this, the second season of excavation, work focused on two sites and, aside from the main Portuguese settlement (Site I), included Site Ill's outlying manor-estate farm. Of the first, anticipating its full excavation, further surviving lower wall and foundations were exposed, with eight building locations now identified. Significantly, early seventeenth-century pottery was forthcoming from the floor surfaces of one, demonstrating that its occupation continued for upwards of a century following the withdrawal of the settlement's state offices in the early decades of the fifteenth century.

We were able to dig a deep environmental test pit in the floodplain beside the site. Intensively sampled by Dr Alvaro Castilla Beltran (Tenerife University), apart from having distinct charcoal horizons, its basal deposits were waterlogged. With these likely to date to the fourteenth century, this will provide major insights concerning the environmental impact of Portuguese colonization.

At Site III's manor farm, further rooms were exposed, as was evidence of its seventeenth-century aftermath and its transformation into a distinctly Luso-African settlement form.

With the season proving successful, a well-attended stakeholder meeting was held with local inhabitants. All were enthusiastic for the excavations to continue in the hope of displaying both sites to attract cultural tourism into what is a very poor area of the country.



Aerial image of Site III's manor farm complex.

#### Mapping Africa's Endangered **Archaeological Sites and Monuments** (MAEASaM)

Paul Lane

This project aims to identify and document endangered archaeological heritage sites across Africa using a combination of remote sensing, records-based research and selective archaeological surveys. It will make records of these sites available in an Open Access Arches geospatial relational database tailored for different interest groups and stakeholders. The project was launched in September 2020 with staggered starts for various project partners, and recruitment of the core team at the McDonald Institute: Dr Stefania Merlo (formerly School of Geography, Archaeology & Environmental Studies, University of the Witwatersrand) as Project Manager, Mahmoud Abdelrazek as Database Developer, Ed Burnett as Research Assistant for the Sudan and Christine Matthews as part-time Project Administrator (shared with the MAHSA project).

The project uses remote sensing to fill in the blanks in our knowledge about archaeological sites and monuments and their condition in eight African countries, and to monitor changes (both anthropic and natural) that threaten their existence. This information is combined with existing site records into bespoke digital databases for the different national authorities with responsibility for documenting and managing archaeological heritage resources in the relevant study countries, and the simultaneous creation of a master relational database (using the Arches software developed by the Getty Institute) for all sites using standardized terminology and a unified resource model. Key tasks during the year were to (i) begin to digitize existing paper records for all of the participating countries; (ii) initiate the use of remote sensing to document previously unrecorded archaeological sites



Gayo Tula Wells, southern Ethiopia on Google Earth 2020.

and monuments; (iii) design and test the Alpha and Beta prototypes of the Arches database, including the development of the resource data model structure and the supporting *Thesauri*; and (iv) run data quality checks. By mid- 2021, just over 11,000 records had been created by project members using different methods. The project also ran some online training workshops for in-country partners and others, in collaboration with the MAHSA project. Further details of activities and the larger team can be found on the project website (https://maeasam.org/) and its social media platforms.

PI Prof. Paul Lane (Co-Is Prof. Stephanie Wynne-Jones, University of York; Prof. Kevin MacDonald, Institute of Archaeology, UCL; Prof. Timothy Insoll, University of Exeter; Dr Daniel Löwenborg, Uppsala University; Prof. Ibrahima Thiaw, Université Cheikh Anta Diop de Dakar, Senegal; Dr Jane Humphris, British Institute in Eastern Africa, Nairobi, Kenya; & Prof. Amanda Esterhuysen, University of the Witwatersrand, South Africa). Funded by the Arcadia Foundation.

#### Adaptation and Resilience to Climate Change (ARCC) in Northwestern **Tanzania**

PAUL LANE

The Adaptation and Resilience to Climate Change (ARCC) project focuses on documenting the parameters leading to socio-ecological resilience in the borderlands area of Kenya and Tanzania, with specific reference to the Serengeti Basin, Tanzania. Its primary aims are to understand how societies, landscapes, ecosystems



ARCC Mapping Future Scenarios workshop in Amboseli, 2020



and Protected Areas have responded to climate change and societal use, and to understand better how they may respond in the future. To do this, the project is focusing on the temporality, spatiality and complexity of interactions and interdependencies of social-ecological systems in northwestern Tanzania over the last 300 years. The main activities undertaken during the year were completion of stakeholder meetings to map possible future scenarios, led by project PDRA Dr Rebecca Kariuki, work on publications, and a new phase of archaeological survey in western Serengeti, led by Dr Thomas Biginagwa (Department of Archaeology & Heritage, University of Dar es Salaam, Tanzania). This resulted in the discovery of a range of sites spanning the early Pastoral Neolithic to the nineteenth century, a sample of which were test excavated, with plans for further study in 2021–22.

PI Paul Lane (Co-Is Prof. Robert Marchant, University of York; Dr Linus Munishi, Nelson Mandela African Institute for Science & Technology, Arusha, Tanzania; Dr Anneli Ekblom, Uppsala University). Funded by Vetenskapsrådet (VR, Swedish Research Council) in association with Sida and Formas.

#### Well Being: Indigenous Wells, Pastoralist Biocultural Heritage and Community Archaeology for Sustainable Development in Northern Kenya and Southern Ethiopia

Paul Lane

This is a collaborative research project between archaeologists and pastoralist community organizations on the long-term history of indigenous water management and well digging in northern Kenya

Large ring cairn of probable early Pastoral Iron Age date, Kalacha, northern Kenya.

and southern Ethiopia. In these arid and semi-arid parts of eastern Africa, wells form a key component of pastoralist biocultural heritage. Community identities and understanding of the landscape are entwined with knowledge—sometimes contested—about water sources, and particularly about the wells dug across the region by earlier generations. Indigenous wells are also models of sustainability and resilience in a challenging and changing environment. Plans for a two-week field season in southern Ethiopia in July 2020 had to be postponed because of the Covid-19 pandemic, and work focused on analysis of existing data collected in previous years and expansion of the remote-sensing mapping of historical wells, stone cairns and abandoned stone enclosures. Online presentations about the project were delivered in a seminar organized by the British Academy, at the BIEA's 60th Anniversary Conference, and to the Cambridge Heritage Research Centre. Two papers on different aspects of the initial results were also prepared for publication.

Co-I Prof. Paul Lane (PI, Dr Freda M'Mbogori, BIEA, Nairobi). GCRF funded via the British Academy as part of its Sustainable Development funding programme.

# Research Networks: *Rising from the Depths*: Utilizing Marine Cultural Heritage in East Africa to Develop Sustainable Social, Economic and Cultural Benefits

Paul Lane

The Rising from the Depths Network (https://risingfromthedepths.com/about/) aims to identify ways in which the marine and maritime cultural heritage of Kenya, Tanzania, Mozambique and Madagascar can be



Extensive pottery on sand spit marking remains of a site impacted by sea level change, Quirimba Islands, Mozambique.

used to benefit coastal communities in these countries. Many of these communities are among the poorest in the region and are especially vulnerable to the impacts of geopolitical turmoil and environmental change. Compared with the region's terrestrial heritage, maritime and marine cultural heritage, in both its tangible and intangible forms, has received only minimal research interest especially from locally based scholars. To address this challenge and to help build local research capacity within the field, the Rising from the Depths Network funds a series of challenge-led, multidisciplinary arts and humanities collaborative research projects by regional researchers with partners in the UK and in the public, private and NGO sectors in the region. The main activities in 2020–21 involved online project management and reviewing the final phase of applications for small research grants. A paper was also written in collaboration with the PI and other co-ls, aimed at reviewing the state of the art in maritime cultural heritage research and protection in eastern Africa and the major challenges facing this heritage. This was later published. A funding application was also submitted with Dr Solange Macamo (Department of Archaeology & Anthropology, Eduardo Mondlane University, Maputo) to the Gerda Henkel Foundation to help establish an Archaeological & Biocultural Heritage Park at Chongoene, Gaza province, Mozambique. Funding was approved, and as PI Dr Macamo was able to initiate discussion with the local government on allocation of land for the park. Work on training a cohort of local heritage stewards in site monitoring, recording and reporting will begin in 2022-23.

Co-I Prof. Paul Lane (PI Dr Jon Henderson, University of Nottingham, plus six other co-ls). Funded by the UK Global Challenges Research Fund through the AHRC.

#### **Research Networks: Reinvigorating** Scandinavian Research in African Archaeology

Paul Lane

This research network aims to revive research by Scandinavia-based researchers on the archaeological collections and associated metadata (including the history of the research) accumulated by the Scandinavian Joint Expedition to Nubia (SJE) as part of the UNESCO-coordinated international campaign to salvage sites threatened by construction of the second Aswan High Dam in southern Egypt, and upstream inundation of archaeological sites and monuments and contemporary settlements across a large area of the Nile Valley in northern Sudan. Uniquely, the expedition involved researchers from Sweden, Norway, Denmark and Finland—the only known instance when archaeologists and other researchers from these four Scandinavian countries have collaborated on a joint field project of this scale. Their rescue campaigns ran from 1960 to 1964 and generated a wealth of data and a series of nine major excavation reports. Many of the finds, including human osteological material, were exported from the Sudan and are now housed in museum and institutional repositories in all four countries, and most are accessible for further study. Some of the Scandinavians who participated later developed careers in African archaeology, while others gained prominence in Egyptology or osteoarchaeology. In marked contrast, Nordic involvement in Nubian archaeology has dwindled, as has the number of Scandinavians actively involved in African archaeology more generally. The network hosted its first in-person workshop in Uppsala in May 2019, before the Covid-19 pandemic. In 2020-21, these shifted online (attended by an average of 25 participants), with three being held over the course of the year bringing together a mix of early-career research and more established academics. The presentations ranged from reviews of the legacies of Scandinavian work in Nubian and African archaeology, its status and future, and presentations on new research on the materials being undertaken by junior researchers based at various Scandinavian institutions. Additional objectives of the network are to facilitate presentation of the SJE collections and their curatorial needs, with reference to the contributions Nordic scholars have made to the field and African archaeology more generally. To this end, the project lead investigators made a brief research trip to Stavanger Museum, Norway in December 2021 to discuss curatorial needs and the long-term future of their Nubian collections.

PI Prof. Paul Lane (Co-Is Prof Per Ditlef Fredriksen, University of Oslo; Dr Angus Graham, Uppsala University; and Dr Rachael Dann, University of Copenhagen). Funded by the Joint Committee for Nordic Research Councils for the Humanities & Social Sciences (NOS-HS).



Glass bead and cowrie shell necklace from Site 25, SJE Collections, Stavanger Museum, Norway.



# Research Networks: The Archaeology of European Colonialism in Africa, and its Heritage Legacies

Paul Lane

This research network aims to stimulate new comparative research on the archaeology of colonial encounters and resistance under German rule into broader comparative perspective. Collaborating partners include the University of Cologne; the Deutsches Archäologisches Institute, Bonn; the Department of Archaeology & Heritage, University of Ghana, Legon; the Department of Archaeology & Heritage Studies, University of Dar es Salaam; the Department of History, University of Namibia; and the Department of Archaeology, University of Lomé. The initial plan for three in-person workshops in Cambridge over the year had to be revised in view of the restrictions arising from the Covid-19 pandemic. Instead, a one-day online meeting was hosted in June 2021, at which a range of papers outlining current research being undertaken on the African continent on the archaeology of German colonialism and memorialization of local resistance were presented. These provided insight into the various material legacies available for archaeological study and opportunities for a joint, cross-continental collaborative project. The papers also highlighted the many complexities around preserving the physical heritage of a colonial presence in post-colonial sub-Saharan Africa. The next meeting will be in the form of a conference session at the PanAfrican Archaeological Congress on Zanzibar in 2022, where plans for a collaborative project will be explored further.

PI Prof. Paul Lane. Funded by the DAAD-University of Cambridge Research Hub for German Studies.



Remains of the German, and later British, fort at Ikoma, Serengeti, Tanzania.

## Life History Theory in Maternal and Child Health: Formative Research in South Africa

RIHLAT SAID MOHAMED & DOUGLAS MOMBERG

Children experiencing food insecurity and repeated infections have compromised development and increased risk for non-communicable diseases in adulthood. In conditions of limited resources, maternal investment in her child may partially buffer against direct impacts. Allocation of metabolic energy by the offspring may be physiologically shunted towards vital biological functions (brain and immune function) at the expense of body growth. In order to test the aforementioned proposition, it is vital to characterise these trade-offs and their timing, while identifying sensitive and practical indicators.

#### \//P1

Environmental and maternal factors and their interactive impacts on child development are being explored in a small study nested in the BUKHALI Trial and consists of a 2-year follow-up of a subsample of 100 women (pregnant at recruitment) and their infants up to 6 months postnatally.

#### WP2

WP2 focuses on support to access clean and safe water, sanitation and hygiene facilities. A crowdsourced ICT platform for mobile phones has been developed, enabling women living in informal settlements to empower each other with information to improve accountability for maintenance, cleanliness and safety of WASH facilities. Its effectiveness in reducing maternal and child morbidity and in improving child development has been tested over a 7-month period in 100 mothers in Soweto.

#### WP3

Consolidated an African and Central American network on maternal and child health. Building on WP1 and WP2 and leveraging existing data in Burkina Faso, and Guatemala, WP3 entailed the design of a large evolutionary public health intervention based on machine learning and geospatial mapping methods, to optimise the allocation of public resources towards maternal and child health, in low-resource settings.

WP1 data collection at the Chris Hani Baragwanath Hospital.

#### iMapNut: Machine Learning to Map and Address Causal Factors of Child Malnutrition in Low- and Middle- Income Countries

iMapNut network: Romuald Palwende Boua (Clinical Research Unit of Nanoro, CRUN, Burkina Faso), RIHLAT SAID MOHAMED, Douglas Momberg, Lee voth-Gaeddert (Centre for Indigenous Health Research Guatemala), Alastair van Heerden (Human Sciences Research Council, South Africa), Shane Norris (Centre of Excellence in Human Development, South Africa) & Julian May (Centre of Excellence in Food Security, South Africa)

Applying an evolutionary public health approach to child malnutrition requires us to consider childhood as a life-history phase during which growth and development are highly responsive to social and ecological cues.

The project iMapNut, supported by the Global Challenges Research Fund Networking Grants, aimed to improve the poor integration of localized data linking causal factors and nutritional status in children at the population level. We proposed extending an African and Central American network, focusing on Water, Sanitation, and Hygiene (WASH), a key causal factor of undernutrition, maternal and child health, and gender concerns to deploy and to build capacity in machine learning and geospatial mapping methods to leverage data on malnutrition and causal factors in South Africa, Burkina Faso and Guatemala.

In 202 the network met in Burkina Faso in Nanoro and launched the pilot study. The network continued working together remotely, including collecting data in the villages of Nanoro and Poessi; identifying and standardizing secondary data across the three study sites (data mining); exploring methodologies for data integration; and extending the platform to the Burkina Faso setting (see pictures). The network then met in Johannesburg, South Africa. The pilot data and preliminary analyses were reviewed. Two virtual seminars and introductory training on machine learning and geospatial methods and their applications to address maternal and child health were hosted.

In the long term, the *iMapNut* network aims to elucidate how the application of evolutionary models of child growth could be used to inform the analysis of the data integrated in the mobile platform and the prediction of child nutritional outcomes in different contexts using machine learning.





Site visit at the Clinical Research Unit of Nanoro/Health and Demographic Surveillance System

#### Historical East African Archaeology and Theory (HEAAT): A Framework for Historical **Archaeology and Identity Formation**

Nik Petek-Sargeant

HEAAT is dedicated to creating a decolonized and community-centred approach to historical archaeology in East Africa, and will highlight the intricate material, environmental and migration histories of modern intersectional ethnic identities. The research will strengthen relationships to archaeological sites and museum collections, among other things to bridge the gap between past cultures and their descendants and raise confidence in the persistence of material culture identities.

I have continued my collaboration with Kenya's Ilchamus community with whom I have been working for almost 10 years. They are a relatively young ethnic community with a complex history of in- and out-migration and extensive links to other Kenyan ethnicities. The work involves analysing archaeological assemblages, archival and museum collections, as well as interviewing and recording craft specialists and elders about oral and traditional object histories. The project's first year has mostly involved working with museums in Europe to understand how ethnographic collections from the late 1800s compare to archaeological assemblages from approximately the same period. Photos from archives and collections are also used as memory elicitation devices during interviews and with crafts people to discuss production techniques and changes. Seeing the photos has inspired participants to re-create material culture and many want to know more about them.

The project is supported by European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No. 884702, the D.M. McDonald Grants and Awards Fund, the British Institute in Eastern Africa, the British Academy Small Grants (SG2122\210789) and the Cambridge Humanities Research Grants.



The Namayana women's group, which is collaborating with the project, welcoming the research team.

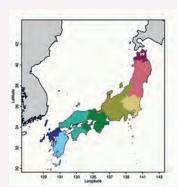
#### **ENCOUNTER** Project

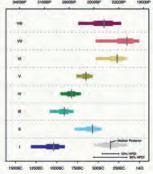
ENRICO CREMA

The ENCOUNTER project (PI: Dr Enrico Crema, https://www.encounterproject.info) started in April 2019, investigating the mode, tempo and impact of the dispersal of rice and millet farming brought into the Japanese islands by migrant communities from the Korean peninsula during the first millennium BCE. The five-year project, funded by an ERC starting grant, is synthesizing one of the richest archaeological records available in the world through new computational and biomolecular methods, and is hosted by the University of Cambridge and the University of York.

Over the last two academic years, the project has welcomed two new members (Dr Simon Carrignon and Dr Chris Stevens), successfully managed to have a two-month research visit to the Nara National Research Institute for Cultural Properties in Japan, and completed several key objectives. Much of the focus has been centred on the development of new computational techniques to model the productivity of rice farming (PhD Student: Leah Brainerd), infer prehistoric population dynamics and estimate regional variations in the rates of crop dispersal. The picture emerging from these studies is one of profound regional variations, with the adoption and spread of rice agriculture characterized by episodes of acceleration as well as slow-downs (see figure below), hinting at the complex interplay between demic versus cultural diffusion, pre-existing social networks and environmental settings. The next few years of the project will focus on examining more closely how these different factors have contributed in defining the dynamics of this adoption process and laid the foundation of the genetic, linguistic and cultural diversity observed in present-day Japan.

This project is funded by the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation programme (grant agreement No 801953).





Estimated arrival dates of rice farming (right panel) in different regions of Japan (left panel) obtained from Bayesian analyses of radiocarbon dates from charred rice remains. (Modified from Crema et al. 2022. DOI: 10.1126/sciadv.adc9171).

## Mapping Archaeological Heritage in South Asia (MAHSA)

Cameron A. Petrie, Rebecca Roberts, Marco Madella & Hector Orengo

Commencing in late 2020, the *Mapping Archaeological Heritage in South Asia* (*MAHSA*) project is documenting the endangered archaeology and cultural heritage of the Indus River Basin and the surrounding areas. The Cambridge-based team, project partners in Spain, and Pakistani and Indian collaborators started working remotely, but are now taking steps to get into the field. Our approach combines the analysis of legacy site documentation with digitized and georeferenced versions of historic Survey of India maps and remotesensing satellite imagery, and machine learning to document archaeological and heritage sites. The data are going into an Arches database structured around resource models that are matched with documentation standards outlined in the CIDOC Conceptual Reference



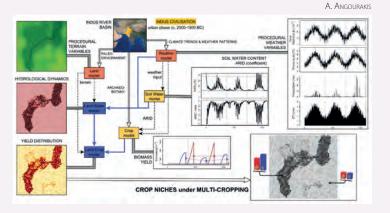
Meeting with Indian collaborators in Cambridge, August 2022.

Model (or CRM). Much of the work for MAHSA builds on approaches developed for the Land, Water and Settlement and TwoRains projects, including use of a bespoke fieldwork data collection tool that has been created using Open Data Kit. The digital map scans will be geospatially searchable in Arches and linked to library holdings via the International Image Interoperability Framework (IIIF). We are also making major contributions to the Arches user community, have established a Sustainability Working Group, and hold regular open training workshops in partnership with MAEASaM.

#### TwoRains in 2020 and 2021

CAMERON A. PETRIE, R.N. SINGH & THE TWORAINS TEAM

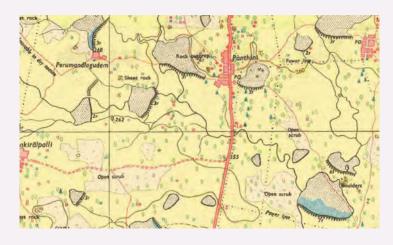
The COVID-19 pandemic made the final stages of the TwoRains project challenging, but by its end in August 2021, the team had generated four PhDs, 40+ publications and 150+ separate talks, posters, press releases and/or social media posts. The project's culmination was an online conference, 'Does Climate Really Cause Collapse? Crossing disciplinary boundaries to understand human/environment interaction in times of stability, change and crisis', which used a seminar-series format of seven half-day sessions over seven weeks. Each session explored themes considering the climatic and cultural environments of the Indus Civilization and how they were developed and transformed by periods of stability, change and crisis. Sessions were timed to maximize engagement from scholars in Asia, Europe and North America, and 669 individuals registered for one or more of the sessions: 10 times the number that could have been accommodated in person. The combination of methods used for TwoRains revealed the complexity of the landscapes inhabited by the populations of the Indus Civilization, showed that there are many more ancient settlements distributed across this landscape than previously believed. It also led to a transformation in the way we understand the impact of diverse environmental contexts on the ancient populations living in these regions. Indus peoples were clearly well adapted to their environment, resilient to changes in that environment, and through their focus on village life as the fundamental building block of their society, they were able to remain sustainable in the face of large-scale droughts and periods of climate variability.



Graphic abstract of the land-model component of the Indus Village model.

## FP4: TIGR<sup>2</sup>ESS project

CAMERON A. PETRIE & ADAM S. GREEN



A historic map of Telangana (India) documenting archaeological sites and water features.

Flagship Project 4 (FP4) of the TIGR<sup>2</sup>ESS project was designed to tap the often under-utilized evidence from the past to gain insights into the types of changes to modern practices and policy that will contribute to resilient and sustainable water management and farming. The principal contribution of FP4 was intended to come as a result of intensive field activities, including on-the-ground assessment of historic water storage and hydrological management infrastructure, water-supply and water-use monitoring, farmer demonstrations, and intensive engagement with local practitioners and stakeholders on the ground. Perhaps unsurprisingly, FP4 was profoundly impacted by the COVID-19 pandemic and the initial lockdown was a critical watershed moment. The team shifted some of its focus towards gathering data to assess the impact of the lockdown on farming practices and water management during the rabi and kharif cropping seasons as they were happening. FP4 was fortunate to sponsor two representatives of the Indian Civil Service (Punjab), Mr Suresh Kumar and Mr Anirudh Tewari, as Centre for Science and Policy Fellows (November 2019, December 2020), which made it possible to engage with these policy makers directly. By highlighting archaeological evidence for sustainable water-management and cropping strategies, FP4 made major steps in connecting archaeology to policy. The evidence for long-term patterns of crop and water management helped to identify interventions that will make present-day agriculture more sustainable, meaning that FP4 is a transformative example of the type of engagement that archaeologists can and should attempt.

## Yangshao Culture: Research History and Heritage Impact

Marie Louise Stig Sørensen

We are entering an era in which increased value is given to 'heritage capital' worldwide. For example, in China heritage is made to serve and provide rationales for far-reaching infrastructural changes that will affect the identity of many provinces. The Neolithic Yangshao culture is particularly interesting in this regard as it has been allocated a seminal role in the formation of a multi-ethnic Chinese nation. To investigate this, the Yangshao project works with three strands: research history, analysis of the discursive production of a Yangshao heritage, and different institutions' roles, including commercial exploitation of the Yangshao Culture.

Work to date has focused on fieldwork and archival studies. We have re-analysed the 1921 discovery of the Yangshao Culture and analysed the activities associated with the 100-year anniversary, traced the history of museums and have begun the collection of views on the value of the Yangshao culture expressed on various social platforms. PhD students are developing important ideas about, respectively, the social imaginary (as a means of scrutinising the relationship between the recent development of Archaeological Parks on Yangshao Culture sites and nationalism) and on branding as a process through which associations to the Yangshao culture become parts of mass culture and widely circulated.

The Yangshao Culture: 100 Year Research History and Heritage Impact (2018–2024). PI Prof. Marie Louise Stig Sørensen; Research Associates Dr Guohua Yang and Dr Rouran Zhang, PhD students Shiting Lin and Junting Lyu. The project is funded by Beifang International Education Group and Shanghai Academy of Guyewang Studies.



The Nantong museum, opened in 1905 as the first public museum in China.

GUOHUA YANG

Yangshao Archaeological Museum, opened in 2021 at the Yangshao Village site.



### The Flowering Desert

Daniel Fuks

The Flowering Desert investigates plant and dung remains from rubbish middens in two microregions of the Negev desert, Israel. The project aim is to reconstruct ancient agropastoral change over the first millennium  $\times$  in this microregion and within a wider Middle Fastern and Mediterranean context.

Preliminary analysis of organic finds from the study sites contributed to two publications in Antiquity (Bucking et al. 2022 and Bar-Oz et al. 2022). In August-September 2022, I hosted visiting PhD student Chiara Belli (University of Haifa) for an internship involving archaeobotanical analysis for joint publication in the final report of the Shivta 2018 excavations. Meanwhile, two review papers offer theoretical background to the project's investigation of agricultural change at seasonal and millennial scales (Fuks & Marom 2021; Fuks et al. 2022, Agronomy). Adopting a multi-regional perspective, the 'Moving Plants' workshop at the McDonald Institute in May 2022 convened archaeobotanists, historians and ethnobotanists to synthesize Mediterranean and Middle Eastern crop diffusion of the first millennium ce. While the proceedings will



Visiting PhD student Chiara Belli retrieving organic remains from archaeological sediment samples at the Pitt Rivers Lab.

constitute a holistic synthesis, the workshop's research theme continues in the Crop History Consortium founded through a seed meeting at the French Embassy in London.

A major project objective is to improve workflows for multiproxy analysis of herbivore dung pellets. Experiments with pretreatments used in radiocarbon dating were conducted at the <sup>14</sup>CHRONO Centre, Queen's University Belfast in February 2022, to identify what minimizes sample loss. Additional analyses of plant macroremains, pollen, phytoliths, micromorphology, lipids, proteins and DNA in ancient dung pellets from the study sites are conducted with collaborators in Cambridge, Copenhagen, London, Oxford, Providence and Tel-Aviv.

British Academy Newton International Fellowship award; Cambridge Humanities Research Grant; McDonald Institute Conferences and Workshops Grant.



Paula Reimer and Daniel Fuks at the ¹⁴CHRONO Centre, Queen's University Belfast.

## The Development of Early Constitutional Thought

ALEX LOKTIONOV

In its first year, the Development of Early Constitutional Thought project has studied a range of administrative, legal and didactic texts from Egypt and Mesopotamia, seeking to understand better the interaction between royal authority, legal systems and their practitioners, as well as local or regional assemblies of varying levels of seniority. In Egypt, theology saw Pharaoh as an outright god, whereas in Mesopotamian thought it was the office of kingship that was deemed to have descended from heaven—but in neither case did such divine favour convey an absolute licence to do whatever monarchs wanted. Thus, for instance, in *Papyrus Westcar* (c. 1800) BCE), the magician Djadjaemankh explicitly tells Pharaoh that executing a prisoner without a valid reason is unacceptable, whereas Mesopotamia's Epic of Gilgamesh (c. 2000 BCE) opens with a list of faults that the people of Uruk have identified with their King. Such instances point to practical limitations to royal authority, highlighting the need to govern with a degree of popular consent, and studying such considerations is the core goal of this project. Its findings thus far might be effectively summarized by the following quote from the Egyptian Tale of Sinuhe (c. 1800 BCE), describing the ideal Pharaoh:

He is the lord of graciousness, great of sweetness – he conquers by love. His city loves him more than its own self, and they rejoice for him more than for any god of theirs. The husbands and wives delight in him!

Together with such work on royal authority, the project has also explored mechanisms for cross-pollination of ideas relating to legal and social control between Egypt and Mesopotamia, with particular reference to codification and severe corporal punishment. The initial findings of this research, which point to significant uptake of Semitic judicial principles by Egypt in the latter half of the second millennium BCE, have been accepted for publication in the upcoming special issue of the International Review of Social History (April 2023). The wider context of these findings is due for publication later in 2023 as part of Alex Loktionov's forthcoming edited volume, Compulsion and Control in Ancient Egypt (Oxford: Archaeopress). A website of open-access resources relating to the core themes of the project, aiming to attract a broader audience of nonspecialists, is also in development.

Alongside the McDonald Institute, the project extends its sincere thanks to the AHRC for generously funding it through the Research Grants (Early Career) scheme. A debt of gratitude is also owed to the project's Co-Investigator, Prof. Andrew Blick of the KCL Department of Political Economy, and Christ's College, Cambridge, who have allocated supplementary funding for Dr Loktionov's work through the Lady Wallis Budge Egyptology Fund.

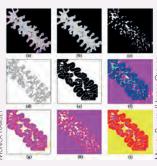
## Changing Methods and Changing Questions in Archaeobotany

Monica Ramsey

During the tenure of her Leverhulme Early Career Fellowship, Monica Ramsey has continued to expand and develop her microbotanical investigations, pursuing several parallel programmes of research. Firstly, while studying the microbotanical residues of stone tools from Ohalo II, she uncovered the first archaeological example of starch spherulites (Journal of Archaeological Science 2021, https://doi.org/10.1016/j. jas.2021.105465), a major finding in the field of archaeobotany. In her pursuit of building larger microbotanical datasets, Ramsey was also awarded a McDonald Fieldwork Grant to develop a machine learning (ML) algorithm to identify multi-cell phytoliths. Working in collaboration with AI expert and collaborator Hector Orengo (ICAC), this grant funded four months of full-time work for a doctoral researcher (I. Berganzo Besga). The initial results are outstanding—93.68 per cent average accuracy differentiating between three multi-cell husk taxa (Journal of Archaeological Science 2022, https://doi.org/10.1016/j.jas.2022.105654). During the fellowship, Ramsey also prepared a paper employing a multi-proxy archaeobotanical dataset from the published macrobotanical and microbotanical research of 19 Epipaleolithic sites from 13,500 years (c. 25-11,500 cal. BP) in the southern Levant. This paper, accepted with the Journal of Vegetation History and Archaeobotany, assesses the palaeoethnobotanical data within the framework of niche construction theory (NCT) to argue that human impacts in the wetlands over generations increased wetland productivity, creating long-lasting ecological-cultural inheritances that allowed for the evolution and proliferation of a wetland-based wild plant food production. Collaborating with Julien Vieugue (CERN, Paris) on a French ANR grant, Dr Ramsey also conducted a pilot study on pottery residues from the Pottery Neolithic site of Shar'Ha Golan (book chapter, forthcoming). She is now supervising a post-doctoral researcher (Jan-Dec 2022) in Cambridge, expanding the pilot study at Shar'Ha Golan, to investigate the foodways of Pottery Neolithic communities.



Starch spherulites from Ohalo II.



Avena phytolith image processed with different image and data augmentation techniques.



# The Glaze Is Less Opaque on the Other Side: Rethinking the Role of The Levant in the Emergence of Islamic Glaze Production

CARMEN TING

My grant has enabled me to investigate the role of the Levant in facilitating the emergence of medieval glaze production, in collaboration with Itamar Taxel (Israel Antiquities Authority) and Oren Tal (University of Tel Aviv). I carried out a one-week visit to Israel in April 2022 to study various glazed tableware assemblages. A hundred ceramic samples – consisting of ware types typical of the Early Islamic period (late eighth-twelfth centuries CE) across the Levant—were selected for further technological study back in Cambridge. I have already started examining the ceramic samples using a combination of macroscopic, microscopic and elemental analyses at the Pitt-Rivers Laboratory for Archaeological Science. The results are expected to fill in an important gap in the existing research on the origins and spread of glaze making across Islamic lands, something I identified through conducting my Renfrew Fellowship project 'The making of Islamic glaze: From the Silk Road to al-Andalus'. I hope my research will stimulate a paradigm shift from the received narrative, which is framed by military history, with Arab conquests portrayed as the sole driving force of an important episode of technological and social innovations in glazing history.

Funding: Council for British Research in the Levant (CBRL) Project Grant.



Some of the samples that I studied and collected at the University of Tel Aviv.

## Keros and the Aegean Early Bronze Age

COLIN RENEREW & MICHAEL BOYD

The Cambridge Keros Project has been investigating the Early Bronze Age (2750–2250 BCE) centre of Dhaskalio and Kavos at the western end of the island of Keros in the central Cyclades, Greece, since 2006. The most recent field season was in 2018; despite the problems of the pandemic, the project is moving toward completion of museum and laboratory study and into the main phase of publication.

The project leverages interdisciplinary approaches to understanding the multi-scale maritime milieux in which Keros functioned as centre of congregation, as locus of production, and pivotal node for the movement of people and materials. Open-area excavation of the small islet of Dhaskalio is combined with survey on the islands of Keros, Kato Kouphonisi and southeast Naxos and targeted excavation on Keros. More than a hinterland, the surveys have shown how the focal points of Dhaskalio and Kavos on Keros functioned within a wider distributed mode of seascape habitation.

Originally identified by Renfrew as the period of an 'international spirit', the project is providing survey, excavation and microarchaeological detail of environment, landscape, architecture and material culture necessary to understand this pivotal period in the eastern Mediterranean, the appearance of 'palatial' society.

The project is supported by the Institute for Aegean Prehistory, the Cyprus Institute, the A.G. Leventis Foundation, Packard Humanities Institute, the Stavros Niarchos Foundation, Gerda Henkel Stiftung, AIGEAS-AMKE, the British Academy, the McDonald Institute for Archaeological Research, the British School at Athens, Cosmote, Blue Star Ferries, EZ-dot and private donors.



H.E. the President of the Hellenic Republic, Katerina Sakellaropoulou, listens to Minister of Culture Lina Mendoni at the opening of the Keros exhibition 'Des Apenanti' in Athens on 25 May 2021.

## **Safeguarding Holocaust Sites**

GILLY CARR

The second and third years of this five-year project, which seeks to write a heritage charter to safeguard Holocaust sites in Europe on behalf of the International Holocaust Remembrance Alliance, have progressed very well.

Now that travel is possible again, the *Safeguarding Sites* team visited the Memorials of Mauthausen, Gusen and Gunskirchen camps in Austria in 2021, and the mass grave and killing site of Paneriai in Vilnius and further killing sites in Forts 4, 7 and 9 in Kaunas, Lithuania, in 2022. The fieldtrips enabled us to make additions to our charter as well as recommendations of good practice to the directors of the Memorials.

The monument protection act in Austria means that the director of Mauthausen Memorial is personally responsible for accidents that happen on site. This means that many changes have been made to the historic fabric to improve accessibility, and the *Todesstiege* [Stairway of Death] to the quarry has been closed off. We are now seeking an amendment to the law.

We observed silences on the subject of perpetrators and the societal aftermath of killings in Fort 9 Memorial, our partner site in Kaunas, among other issues, and will now work with the Memorial to help them find a way to present their difficult histories.

At the end of the summer, all project members and partners will meet at Auschwitz Memorial for fieldwork and to work further on the charter.

Funding: International Holocaust Remembrance Alliance (IHRA). https://www.holocaustremembrance.com/resources/projects/safeguarding-sites-ihra-charter-best-practice



Mauthausen Memorial, 2021 (Gilly Carr in red).

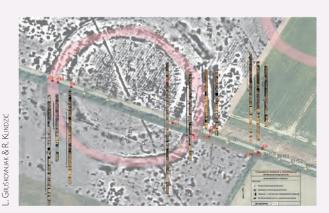
## *Heristem*: Geoarchaeological Field Course at Tomašanci Dubrava, Croatia

CHARLES FRENCH

Geoarchaeological survey fieldwork was carried out in May 2022 at the later Neolithic settlement site of Tomašanci Dubrava near modern Đakovo in southeastern Croatia by students and staff members from the Universities of Belgrade, Ljubljana and Zagreb, instructed by three geoarchaeological teams from the Universities of Cambridge and Pula/Pisa, and Arhej (Ljubljana). This was the main Cambridge contribution to the *Heristem* Erasmus+ project with Charles French, Petros Chatzimpaloglou and Gian Battista Marras as instructors.

The borehole survey made a long east—west transect across the middle of the site. It revealed archaeological levels of the c. 6–5000-year-old *in situ* Neolithic occupation from c. 1.25 m to 3.5 m below ground level, and often defined in several phases. The site is situated on a former alluvial floodplain developed in a Pleistocene loessic marsh area, but which was still prone to seasonal flooding during and after the occupation period. Later the site was affected by the accumulation of loessic silt soil material and hillwash, burying the site.

By participating in this field course, archaeological students and staff alike with no experience of geoarchaeology were exposed to the basics of geoarchaeological techniques for investigating archaeological landscapes and to recognize how these may have been modified in the past by human activities.



The borehole loci and logs superimposed over the magnetometry survey of Tomašanci Dubrava.



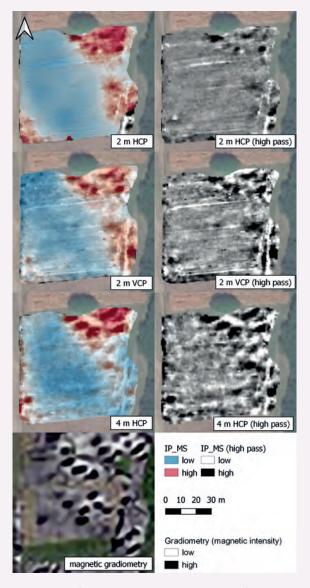
Students and staff conducting an augering transect across Tomašanci Dubrava. CHARLES FRENCH, TONKO RAJKOVAČA, PHILIPPE DE SMEDT & TIMOTHY KINNAIRD

Fieldwork at early Neolithic Drenovac in the Drenovački valley and the adjacent Morava floodplain was conducted in September 2021 by a joint team from Cambridge (Charles French, Tonko Rajkovača and Petros Chatzimpaloglou), St Andrews (Dr Timothy Kinnaird for OSL) and Ghent (Dr Philippe De Smedt with a geophysical team of four). We were hosted and assisted by Prof. Slavisa Perić, Djurdja Obradovic, Vesna Popvic and Aleksandar Milekić from the Institute of Archaeology in Belgrade.

The combined geoarchaeological, geophysical and chronological studies consistently indicate that the Drenovački valley is largely infilled and modified by the deposition of hillwash (or colluvium). It is ostensibly composed of eroded former humic topsoils (or Ah) and B horizon soil material, suggesting that there has been substantial clearance and agricultural impact leading to substantial soil erosion within this valley system during prehistoric times, beginning in the sixth millennium BC. It is also clear that there are substantial deposits of eroded topsoils finding their way into the adjacent Morava floodplain as alluvium.

These findings have been put into a more continuous spatial context through the geophysical survey data. While the EMI (magnetometry) data show the lateral extent of the archaeological and hillwash deposits and indicate significant eroded anthropogenic material in the eastern part of the study area, the ERT (resistivity) and IP\_MS (magnetic susceptibility) datasets have shown the potential to discriminate stacked occupation levels of different periods, particularly the burnt daub structures.





IP\_MS data from the test area along with reference magnetic gradiometry data as an example of providing time and structure depth to the archaeological record.

(Left) The coring rig and EMI survey in action on the Morava floodplain at Drenovac.

## Geoarchaeological Provenancing of Potential Lithic Resources around Tesanj in the Ussara/Bosna Valley and Banja Luka in the Vrbas Valley, Bosnia i Herzegovina

Charles French, Petros Chatzimpaloglou & Tonko Rajkovača

Initial reconnaissance and sampling fieldwork was conducted in the spring of 2022 in two areas of Bosnia i Herzegovina, the Ussara/Bosna valleys around Tesanj (west of Doboj) in the Federation and the Vrbas valley around Banja Luka in the Republic of Srpske. The project aims to use interdisciplinary methodologies and collaborative research to review the known Middle–Upper Palaeolithic archaeological record for the Vrbas valley and conduct reconnaissance and laboratory investigations of possible lithic resource locations in the valley systems.

In Tesanj we were shown lithic assemblages from about 20 sites identified in a c. 10 km radius around the town. From these, Palaeolithic material from four sites was selected for provenancing laboratory analysis. Despite fresh snow, we were also able to prospect one possible quarry area in the Trebačko Brdo hills near Trepecine to the southwest of Tesanj and examine several limestone exposures along the Jelah-Banja Luka road and Ussara river. Examination of



Map of the North Bosnia study area.

the 2006–08 North Bosnia survey Middle Palaeolithic lithic material from around Banja Luka and new provenancing reconnaissance southwest into the mountains of the Dimitor region to the south of the city discovered dense bedded chert exposures at the Zelenkovac camp in the Black River tributary stream valley (image below left).

In both survey areas, initial laboratory testing (FTIR-ATR and LA-ICP-MS) suggests that only a few available local chert sources may have been exploited. There is also a potential new obsidian source at Llubija just to the west of Prijedor. Its existence may have great implications for accurately defining prehistoric exchange networks of the broader region and the extent of resources exploitation within North Bosnia.



Chert outcrops at Zelenkovac second quarry:

(a) black chert in front of P. Chatzimpaloglou and towards the top of the quarry profile there is a horizontal bed of red chert (yellow box);

(b) a closer view of the top exposure where the red bedded chert is clearly visible (yellow arrows).

#### **McDonald Annual Lecture**

- **© 11 November 2020** ROBERT FOLEY (*University of Cambridge*) Selection, diversity and ecology in human evolutionary studies
- 11 May 2022 (2021 rearranged) ALISON WYLIE (University of British Columbia) Bearing witness: collaborative archaeology in a settler colonial context

#### **Distinguished Visitor Lecture**

archaeological narratives of slavery

● **18 May 2022** THERESA A. SINGLETON (Syracuse University & Pitt Professor of American History and Institutions, 2021–22, University of Cambridge) - The worlds the enslaved created or forced to endure. Balancing

#### **Conferences & Workshops**

**© 22–23 September 2022** - Symbols in Action at 40: Baringo and Beyond (*recipient of McDonald £10,000 Conference Award*)

#### **Garrod Research Seminars**

#### Michaelmas 2020

- 15 October Abidemi Babatunde Babalola (University of Cambridge) Africa and the discourse of inventiveness: deep historical and archaeological perspectives
- 22 October Beatriz Marín-Aguillera (*University of Cambridge*) Slavery, emancipation, and the quest for reparations in Antigua and Barbuda
- **29 October** *Roundtable panel discussion* Embedding Black history and archaeology in British schools
- **© 5 November** Amélie Beaudet (*University of Cambridge*) *Australopithecus* from Sterkfontein Caves (South Africa): an evolutionary species?
- **19 November** Emma Pomeroy (*University of Cambridge*) New Neanderthal discoveries at Shanidar Cave, Iraqi Kurdistan

#### Lent 2021 - Decolonising Archaeology

- 28 January Ayana Flewellen (*UC Riverside*) The Society of Black Archaeologists: Envisioning a Diverse and Inclusive Discipline
- **4 February** Peggy Brunache (*University of Glasgow*) Black culinary resistance in the French Caribbean during the slavery era
- **11 February** Uzma Rizvi (*Pratt Institute*) On the right of refusal: decolonizing archaeology and equitable practices
- 18 February Ben Marwick (*University of Washington*) Galisonian logic devices as affordances for decolonizing archaeology
- **4 March** Ty Tengan (*University of Hawai'i at Manoa*) Towards a Kuleana anthropology: responsibility & relationality in Hawai'i and Oceania
- **11 March** Catherine Namono (*Wits University*) Engaging custodians of coloniality in archaeology: an African experience
- **18 March** Gal Jorayev (*University College London*) Ethics of archaeology: a post-Soviet (Central Asian) experience

#### Michaelmas 2021

- 14 October Svetlana Nurgaziyeva (*East Kazakhstan Regional Museum of Local History*) Gold from the Great Steppe: new discoveries that changed the course of a regional museum
- **© 21 October** Arystanbek Muhamediuly (*National Museum of Kazakhstan*) Historical landmarks and national history: The case of Kazakhstan
- **Q4 November** Jimena Lobo Guerrero Arenas (*Museum of Archaeology & Anthropology, Cambridge*) Do you know who knows what you don't? Construction of negotiated archaeological narratives
- **11 November** Aidan O'Sullivan (*University College Dublin*) It might have been like this? Experimental archaeology: making, understanding, storytelling
- 18 November Tinna Äikäs (*University of Oulu*) From reindeer antlers to tea light candles: Multiple users at the Sámi offering places
- **© 25 November** Nam Kim (*University of Wisconsin-Madison*) Entangled histories: archaeology, modern politics, and heritage in Vietnam

## Lent 2022 – The North Atlantic Highway, Materiality and Mobilities throughout Europe, Africa and the Americas

- 20 January Theresa A. Singleton (Syracuse University & Pitt Professor of American History and Institutions, 2021–22, University of Cambridge) - Afro-descendants on the move: archaeologies of Afro-Atlantic secondary and reverse diasporas
- © 27 January Johana Caterian Mantilla Oliveros (*Universidad Surcolombiana*) Landscapes of freedom: kinship-relations and geographical imagination of the Maroons of 'la Sierra de la María' during the 17th–18th century, Colombia
- **3 February** RYAN ESPERSEN (*University of Cambridge*) No dollar too dark: free trade, piracy, privateering and illegal slave trading in the northeast Caribbean, early 19th century
- 10 February ALISSANDRA CUMMINS (Barbados Museum & Historical Society) The presence of absence: interrogating and interpreting forced and free migration in the Atlantic Caribbean
- 17 February Akin Ogundiran (*UNC Charlotte*) Sociality of merchant capital and archaeology of early modernity in Atlantic Africa
- **24 February** Liza Gijanto (*St Mary's College of Maryland*) Living on Atlantic time: commerce and daily life on the Gambia River
- **3 March** Audrey Horning (*College of William & Mary, Queens University Belfast*) Dissonance and convergence in the north Atlantic: Ireland and the archaeology of European expansion
- 10 March Matthew Johnson (*Northwestern University*) Enduring structures, patterns of change: 'English' landscapes in the northern Atlantic, 1000–1800 ce

### Easter 2022 – Historical Ecologies of Scales

- 28 April Alf Hornborg (*Lunds Universitet*) Toward an acknowledgement of the invisible social metabolism of prestigegoods exchange in the Prehispanic Andes
- **© 5 May** ROLAND FLETCHER (*University of Sydney*) Low-density urbanism, risk and climate instability
- 19 May JOHN MURPHY (Northern Illinois University & Argonne National Laboratory) Modelling 'The Dawn of Everything': how simulation of a complex yesterday might (or might not) help us with a complicated tomorrow
- **© 26 May** Junko Habu (*University of California*) Historical ecology and changes in Jomon landscape practice: examples from northeastern Japan
- © 2 June Annell Ekblom (*Uppsala Universitet & IHOPE*) Landscape history, archaeology and storytelling
- **9 June** CHELSEY GERALDA ARMSTRONG (Simon Fraser University) Documenting land-use legacies in the Pacific Northwest of North America: coupled archaeological and ecological signatures of indigenous forest gardens
- **16 June** SJOERD KLUIVING (*Vrije Universiteit Amsterdam*) TERRANOVA from the last and current Interglacial periods into the Anthropocene: an Atlas database drawing lessons from ancient land use for future European landscape management



### **Discussion Groups**

Set up and run by postgraduate students since 2016, the **Aegean Archaeology Group** works to bring together researchers from the Department of Archaeology and the Faculty of Classics in support of interdisciplinary approaches to the history of the lands in, around, and in contact with the Aegean Sea. This collaborative initiative aims to facilitate dialogue across traditional academic boundaries and strengthen ongoing research through the promotion of comparative scholarship.

**Organizers:** 2020–21: Jan Sienkiewicz & Rafael Laoutari; 2021–22: Rafael Laoutari & Andriana Maria Xenaki

The **African Archaeology Group** showcases leading-edge Africanist archaeological research from across the continent and all periods from the Early Stone Age to Contemporary Heritage. We invite speakers from the continent, the UK and globally to share their latest data, analyses and ideas from the field to the lab.

Organizer: 2020–21: Nicolas Nikis; 2021–22: Federica Sulas

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!

**Organizers:** 2020–21: Joshua Fitzgerald, Jasmine Vieri & Oliver Antczak; 2021–22: Jasmine Vieri, Oliver Antczak and Joshua Fitzgerald

**Ancient Near East Seminars**: with visiting speakers coming from universities, museums and other institutions from around the world, it is hoped that these evenings will offer a focus for the wide range of Assyriological and Ancient Near Eastern archaeological projects across the University, build links with other research centres, and offer a chance for all to see the incredible work that is being carried out in this vast and hugely important field of research.

**Organizers:** 2020–21: George Heath-Whyte, Kyra Kaercher, Glynnis Maynard & Sergio Russo; 2021–22: Glynnis Maynard & Sergio Russo

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!

Organizer: 2020–21: Dylan Gaffney; 2021–22: Friederike Jurcke

The **Biological Anthropology Seminar Series** aims to discuss key topics in human evolutionary studies. Speakers from the UK and overseas institutions are invited to talk about their research in biological anthropology.

**Organizers:** 2020–21: Rihlat Said Mohamed, Emma Pomeroy & Keaghan Taxley; 2021–22: Amélie Beaudet, Lucía Nadal Urías & Matthew Van Schalkwyk

The **Computational and Digital Archaeology Lab** (CDAL) is a hub for doctoral, post- doctoral and faculty levels that are committed to advancing the application of digital, computational, and quantitative methods in archaeology. The workshop series brings together experts of the field from around the world showcasing their latest research.

**Organizers:** 2020–21: Leah Brainerd & Friederike Jurcke; 2021–22: Alfredo Cortell-Nicolau & Mahmoud Abdelrazek

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.

Organizer: 2020–21: Alexandre Loktionov; 2021–22: Rune Olsen

East Anglia is a very active region in commercial archaeology. **Field Archaeology: Methods and Mayhem** (FAMM) is a forum where the concerned parties across the spectrum: Archaeological Units, Development Control, Outreach groups and the University can discuss the ongoing advancements, discoveries and the problems within this region and beyond.

The **Garrod Research Seminar Series** is the Department of Archaeology's principal seminar series of invited scholarly lectures. Each new term has a common theme, and should comprise a mix of external and internal speakers presenting on the theme from different (e.g. geographical, methodological, analytical, theoretical, disciplinary) perspectives.

**Organizers:** 2020–21: Department staff, Kim Eileen Ruf & Saltanat Amirova; 2021–22: Rebecca Roberts & Carmen Ting, Oliver Antczak & Joshua Fitzgerald, Federica Sulas & Nik Petek-Sargeant

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.

Organizer: Ben Davenport

The **Later European Prehistory Group** (LEPG) welcomes everyone interested in the European Neolithic, Bronze and Iron Ages. For more than 40 years, the LEPG has been a core activity within Archaeology at Cambridge. The group aims to appeal broadly not only within the field of prehistory but also within heritage and classics, and to provide an informal and friendly setting for the exchange of ideas, dissemination of research results and the discussion of current topics of interest.

Organizers: 2020–21: Elena Scarsella & Camilla Zeviani; 2021–22: Camilla Zeviani

A series of events hosted by the **Material Culture Research Hub**: the **Thinking about Things** (TAT) reading group, lunchtime presentations by hub members to help develop ideas, workshop days with other disciplines and a guest lecture series bringing in archaeologists and social theorists from around the world.

Organizer: Sheila Kohring

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

Organizer: 2020–21: Samantha Leggett; 2021–22: Emma Brownlee

The **Palaeolithic-Mesolithic seminar series** (PalMeso) is the longest running format of talks within the Department of Archaeology. PalMeso presents talks on the Palaeolithic and Mesolithic, and is open and free to anyone who is interested to come along. Talks are given by internal MPhil and PhD research students, as well as post-docs, visiting scholars and university lecturers from UK and overseas academic institutions..

Organizer: 2020–21: Andreas Nymark; 2021–22: Aman Kang

The **Pitt-Rivers Archaeological Science Seminars** are well-established as a relatively informal and highly dynamic meeting point for archaeological scientists of all kinds who share their research as it happens – often before it has made it to publications. Our speakers include researchers based in or around Cambridge as well as visitors from around the world.

**Organizers:** 2020–21: Laura Courto & Alette Bloom; 2021–22: Rachel Blevis, Mark Davis, Ruairidh Macleod & Miranda Evans



## Sutton Trust Archaeology and Biological Anthropology Summer School

The Cambridge Sutton Trust summer schools are highly competitive, week-long, subject-specific courses open to students studying in Year 12 (or equivalent) at a UK state school. Normally, these summer schools are residential, giving participants a real feel for what it's like to live and study as a Cambridge student. The 2021 summer school, however, was held entirely online, much like the 2020 version, with participants learning about archaeology through a virtual learning environment of video presentations and online tasks and supervisions.



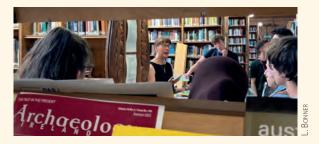
Biological anthropology practical as part of the Sutton Trust summer school.

Luckily, the 2022 Sutton Trust summer school was back to an in-person event. Our nine participants had a five-night residential stay in college learning about the University and student life. We were able to welcome them to the Department with a full-on programme including an artefact handling session in the Museum of Archaeology and Anthropology, a workshop on Egyptian language, a variety of lectures and talks, a zooarchaeology practical, a computational archaeology session, supervisions and the opportunity to write and present their own original bit of research having used the resources on offer in the Haddon Library.

Holding virtual and in-person summer schools can be a challenge and it is only thanks to the time, energy and support of student and staff volunteers that these summer schools continue to be a success, with many of the participants considering applications to study archaeology or biological anthropology at highly selective universities.



Zooarchaeology practical as part of the Sutton Trust summer school.



Dr Meg Westbury introduces summer schoolers to the Haddon Library

## **Cambridge Festival 2022**

As part of the Cambridge Festival, Dr Marie Besnier hosted three online workshops for children on 5–7 April 2022. The theme of the workshops was 'Living in a Sumerian City in the Third Millennium BC'. Participants were provided with videos and activity sheets in advance before joining one of the live sessions to learn more about urban life in ancient Sumer.

#### **Masterclasses**

The Cambridge Admissions Office organizes a number of subject-specific Masterclasses every year and in 2020–22 the Department of Archaeology held four of these online. Prospective undergraduates heard from Dr Susanne Hakenbeck and Prof. Matthew Collins in May 2021 about 'If Skeletons Could Speak' and 'Reading the Book using Palaeoproteomics' respectively; Matthew presented this talk again in November, alongside Prof. John Robb's talk 'Reading the Paradoxes of Ancient Pictures'. In April, students had another taster with John on 'Italian Cuisine, 5000 Bc' and with Dr Emma Pomeroy on 'Evolutionary Perspectives on Human Care for the Sick'. The final prospective undergraduate Masterclass was held in August where Dr Andreas Pantazatos asked 'Why Do We Care About Ruins?' and John Robb (an absolute outreach trooper) rounded the event off with 'Open Day at Cambridge, 700 Years Ago: Meet the (Medieval, Skeletal) Teaching Staff'.

## **NewVic Workshop 2022**



Newham Sixth Form students visit the '[Re:] Entanglements' exhibition at the MAA.

On 30 March 2022, the Department of Archaeology, Magdalene College and the Museum of Archaeology and Anthropology hosted a workshop for students from Newham Sixth Form (NewVIc) College centred around the '[Re:] Entanglements: Colonial collections in decolonial times' exhibition and the 'African Kingdoms' A-level. The 20 students and two teachers heard from a variety of speakers, including Prof. Paul Lane, Nicole Sithole, Stanley Onyemechalu and Olivia Shelton before visiting the exhibition and museum, guided by Benjamina Dadzie.



Benjamina Dadzie gives a tour at the MAA as part of the Newham Sixth Form workshop.

The Department and Paul Lane will continue the relationship with NewVIc in future and are thankful to teachers Carina Ancell and Alex Cazaly for helping to develop the programme. 2023 will see further opportunities to

promote the project and disciplines of archaeology and anthropology more widely to school teachers from across the UK.



Newham Sixth Form students and staff at Magdalene College as part of their workshop

## **Open Days**

The Department held virtual Open Days for prospective students on 18 & 19 February 2021 and participated in the University virtual Open Days on 8 & 9 July 2021, having created a whole host of online resources for the new virtual tour platform.

Industrial action saw the February 2022 Department Open Days cancelled, but we were able to welcome back hundreds of visitors in July 2022 to the University's first in-person Open Days since 2019. Although the format was slightly altered from previous iterations, the format

Dr Meg Westbury shows Open Day visitors around the Haddon Library.



worked well, with visitors able to talk to Department staff on Downing Site and visit a few facilities including some of the archaeological science labs, the Museum of Archaeology and Anthropology and the Haddon Library. Long may in-person Open Days continue, as being able to experience the Department in the July sunshine is far more impactful than a dreary PowerPoint delivered over Zoom!

## **Egyptology Study Day 2022**

A distinctive feature of the Cambridge archaeology tripos is the inclusion of Egyptology and Assyriology as standalone subject tracks within the same course. The Department hosted an online Egyptology study day on 10 May 2022, featuring talks from Dr Hratch Papazian on 'Ancient Egyptian Hieroglyphs and Text' and from Dr Kate Spence on 'Tutankhamun's Tomb 100 Years on from Discovery'. An important feature of any event for prospective students is the inclusion of the voices of current students to detail their experience of the course, the application process, college life, etc., and we were delighted to hear from Maria Kazani, Jasmine Feldman and Natasha Rai during this workshop.

### **University Archaeology Day**

University Archaeology Day is an annual event organized by UAUK. The event is designed for prospective students, teachers and parents to learn about the degree programmes on offer across the UK and to discover the range of career opportunities that an archaeology degree can lead to. The fourth and fifth annual University Archaeology Days were held online on 22 October 2020 and 21 September 2021.

## **London Anthropology Day**

London Anthropology Day (LAD) is a regular fixture in our outreach calendar and has been for many years. The day is coordinated by the Royal Anthropological Institute and is a free university-taster day for students, careers advisers and teachers. In 2021, LAD was a virtual event featuring online drop-in sessions hosted by Dr Emma Pomeroy and Laure Bonner. LAD 2022 was held in person on 30 June in the Clore Centre at the British Museum. Dr Ashleigh Wiseman and Laure Bonner hosted a drop-in stall. Ashleigh ran a workshop on 'Meet the Ancestors', introducing participants to how early human species differ by exploring the differences in skull shape and showing how these differences relate to how we move, what we eat and life history.

## **LGBT+ History Month**

February is LGBT+ History month in the UK. This annual celebration aims to promote equality and diversity by increasing the visibility of LGBT+ people, their histories, lives and experiences.

In 2021 and 2022, the LGBT+ History Month 'Queer(y)ing the Past' events were co-organized by the outreach coordinator and the student-led Archaeological Field Club (AFC). Both events were held virtually. Speakers in 2021 included Dr Sophus Helle, who presented 'What Would a Queer Philology Entail?', Prof. María Fernanda Ugalde and Prof O. Hugo Benavides who presented 'Homosexual Harems, Lesbian Mothers, Third-Gender Weavers and Other Normative Tales from the Andean Past: Archaeology's Conflicted Epistemologies' and Zachary Nissen on 'Before the Binary: Queer Archaeologies and Social Diversity in Pre-colonial Latin America'.

The 2022 event had as its keynote speaker Gabriela Oré Menéndez ,who presented 'Redefining (My) Archaeological Practice Through Queer Lenses', which focused on using queer theory to redefine the ways in which researchers approach archaeology —from methodology to data interpretation.

Gabriela Oré Menéndez, speaker at the 2022 LGBT+ History Month lecture.



## Cambridge Archaeological Journal

ELIZABETH DEMARRAIS & JOHN ROBB (Editors)

Volumes 30-32 continued the CAJ tradition of publishing a huge variety of innovative archaeology. Submissions and acceptance rates held steady through the onset of the pandemic, and we are particularly grateful to our dedicated reviewers for their help in this chaotic period. Contributions ranged from what hominin stone tool flaking can imply for cognitive capacities to design objects, through Andean geoglyphs and Aegean Bronze Age figurines to interviews with active practitioners of Australian rock art. A special section explored how materials were meaningful to Palaeolithic huntergatherers; another explored the potential of posthumanism in archaeological theory; and a third presented new work in post-humanist feminism.



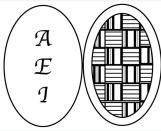














#### Vol. 30 No. 4, November 2020

- Iron Age 'Predatory Landscapes': A Bioarchaeological and Funerary Exploration of Captivity and Enslavement in Britain BY REBECCA REDFERN
- Becoming Dead: Burial Assemblages as Vitalist Devices by Fredrik Fahlander
- Speaking With the Other and Not Only About the Other: Reflections for a Postcolonial Archaeology By Luana Carla Martins Campos Akinruli
- How the Cycladic Islanders Found Their Marbles: Material Engagement, Social Cognition and the Emergence of Keros By ALEXANDER ASTON
- Hieroglyphic Texting: Ideologies and Practices of Classic Maya Written Evidence BY SARAH
  F. JACKSON
- Type and Token in the Prehistoric Origins of Numbers by OLIVER SCHLAUDT
- Hominin Stone Flaking and the Emergence of Top-down' Design in Human Evolution BY MARK W. MOORE
- Upper Palaeolithic Installation Art: Topography, Distortion, Animation and Participation in the Production and Experience of Cantabrian Cave Art by Takashi Sakamoto, Paul Pettitt & Roberto Ontañon-Peredo
- Wealth Inequality in the Ancient Near East: A Preliminary Assessment Using Gini Coefficients and Household Size BY PERTEV BASRI & DAN LAWRENCE

#### Vol. 31 No.1, February 2021

- Project Holocene: The Clayful Phenomenology of Jōmon Flame Pots by Paul Louis March
- The 40,000-Year-Old Female Figurine of Hohle Fels: Previous Assumptions and New Perspectives By Melissa K. Stannard & Michelle C. Langley
- Watery Relations and Creations: Ancient Maya Engagement with the Cara Blanca Pools BY JEAN T. LARMON
- The Role of Environmental Factors in the Early Development of Egyptian Stone Architecture BY JUN YI WONG
- Revisiting the Past: Material Negotiations between the Classic Maya and an Entombed Sweat Bath at Xultun, Guatemala by Mary E. Clarke, Ashley E. Sharpe, Elizabeth M. Hannigan, Megan E. Carden, Gabriella Velásquez Luna, Boris Beltrán & Heather Hurst
- The Geoglyph as a Medium for Anarchist Ritual by Darryl Wilkinson
- An Archaeology of the Aesthetic: Slavery and Politics at the Jesuit Vineyards of Nasca BY Brendan J.M. Weaver
- Faces in the Stone: Further Finds of Anthropomorphic Engravings Suggest a Discrete
  Artistic Tradition Flourished in Timor-Leste in the Terminal Pleistocene By Sue O'Connor,
  Nuno Vasco Oliveira, Christopher D. Standish, Marcos García-Diez, Shimona Kealy & Ceri Shipton
- Artefact Categories, Artefact Assemblages and Ontological Alterity BY SIMON HOLDAWAY & REBECCA PHILLIPPS
- Reindeer Imagery in the Making at Ust'-Polui in Arctic Siberia by Tatiana Nomokonova, Robert J. Losey, Natalia V. Fedorova, Andrei V. Gusev & Dmitry V. Arzyutov

#### Vol. 31 No. 2 May 2021

- Some Are More Equal Than Others: Intrasettlement Social Organization in Spišský Štvrtok (EBA/MBA, Slovakia) by Dominika Oravkinová & Jozef Vladar
- Power, Personhood and Changing Emotional Engagement with Children's Burial during the Egyptian Predynastic By Pablo Barba
- 'I Have Done Hundreds of Rock Paintings': On the Ongoing Rock Art Tradition among Samburu, Northern Kenya by Joakim Goldhahn, Stephen Longoida Labarakwe, Peter Skoglund & Fere Westergern
- Singa Transitional: Rock-art Saywas Marking Boundaries of Identity and Socializing Landscape in Huánuco, Peru By Jonathan J. Dubois
- Tending the 'Contested' Castle Garden: Sowing Seeds of Feminist Thought BY KAREN DEMPSEY

Special Section: When Materials Speak about Ontology: A Hunter-Gatherer Perspective

- Beyond Tools and Function: The Selection of Materials and the Ontology of Hunter-Gatherers. Ethnographic Evidences and Implications for Palaeolithic Archaeology BY ELLA ASSAF & FRANCESCA ROMAGNOLI
- Material Scientists: Learning the Importance of Colour and Brightness from Lithic Practitioners BY KATHRYN WEEDMAN ARTHUR
- Gymea and the Fishing Technologies of the New South Wales Coast, Australia BY CLIVE FREEMAN, JULIE FREEMAN & MICHELLE C. LANGLEY
- Small Signals: Comprehending the Australian Microlithic as Public Signalling BY PETER HISCOCK
- Changes in Raw Material Selection and Use at 400,000 Years BP: A Novel, Symbolic Relationship between Humans and Their World. Discussing Technological, Social and Cognitive Arguments BY FRANCESCA ROMAGNOLI
- Memory Scrapers: Readymade Concepts and Techniques as Reflected in Collecting and Recycling Patinated Lower Palaeolithic Items at Qesem Cave, Israel BY BAR EFRATI
- The Elephant in the Handaxe: Lower Palaeolithic Ontologies and Representations BY RAN BARKAI



#### Vol. 31 No. 3 August 2021

- Seeing Children in Prehistory: A View from Bronze Age Ireland BY MARK HAUGHTON
- Tales from the Supplementary Information: Ancestry Change in Chalcolithic–Early Bronze Age Britain Was Gradual with Varied Kinship Organization by Thomas J. Booth, Joanna Brück, Selina Brace & Ian Barnes
- Thinking Through Monuments: Levantine Monuments as Technologies of Community-Scale Motivated Social Cognition BY TIMOTHY HOGUE
- Soay Sheep: The Back-story by Andrew Fleming
- Weathering Climate Change in Archaeology: Conceptual Challenges and an East African Case Study BY NIK PETEK-SARGEANT & PAUL J. LANE

#### Special Section: Debating Posthumanism in Archaeology

- Posthumanism in Archaeology: An Introduction by Manuel Fernández-Götz, Andrew Gardner, Guillermo Díaz de Liaño & Oliver J.T. Harris
- he Predicament of Ontology by Robert W. Preucel
- What Difference Does Posthumanism Make? By Rachel J. Crellin & Oliver J.T. Harris
- Finding symmetry? Archaeology, Objects, and Posthumanism BY Christopher Witmore
- Ethics, Not Objects by Ruth M. Van Dyke
- A Relational Marxist Critique of Posthumanism in Archaeology BY RANDALL H. McGuire
- Taking the Wrong Turn? Re-examining the Potential for Practice Approaches in Archaeology BY ANDREW GARDNER
- Posthuman Potentials: Considering Collaborative Indigenous Archaeology BY CRAIG N. CIPOLLA
- Indigenous Theory is Theory: Whakapapa for Archaeologists BY YVONNE MARSHALL
- Bodily Entanglements: Gender, Archaeological Sciences and the More-than-ness of Archaeological Bodies BY CHRISTINA FREDENGREN
- Revisiting the Chinese Room: Looking for Agency in a World Packed with Archaeological Things BY ARTUR RIBEIRO
- Posthumanism, New Humanism and Beyond by Guillermo Díaz de Liaño & Manuel Fernández-Götz

#### Vol. 31 No. 4 November 2021

- Dung on the Wall. Ontology and Relationality in Qurna: The Case of TT123 BY JOSÉ ROBERTO PELLINI
- Subaltern Debris: Archaeology and Marginalized Communities BY BEATRIZ MARÍN-AGUILERA
- Economic Aspects of Settlement in the Oasis of Bukhara, Uzbekistan:
   An Archaeo-Economic Approach by Rocco Rante & Federico Trionfetti
- Agents of Death: Reassessing Social Agency and Gendered Narratives of Human Sacrifice in the Viking Age By MARIANNE MOEN & MATTHEW J. WALSH
- Technology, Use and Reuse of Gold during the Middle Period: The Case of Casa Parroquial, Atacama Desert, Chile By María Teresa Plaza & Marcos Martinón-Torres
- Prehistoric Pendants as Instigators of Sound and Body Movements: A Traceological Case Study from Northeast Europe, c. 8200 cal. BP BY RITTA RAINIO, DMITRY V. GERASIMOV, EVGENY YU. GIRYA & KRISTIINA MANNERMAA
- Iron Age Mnemonics: A Biographical Approach to Dwelling in Later Prehistoric Britain By LINDSEY BÜSTER
- Is Acheulean Handaxe Shape the Result of Imposed 'Mental Templates' or Emergent in Manufacture? Dissolving the Dichotomy through Exploring 'Communities of Practice' at Boxgrove, UK BY LAURIE HUTCHENCE & CHRISTOPHER SCOTT
- What Makes a Mound? Earth-Sourced Materials in Late Iron Age Burial Mounds by Rebecca Cannell
- Animal Scavenging as Social Metaphor: A Carved Chlorite Vessel of the Halil Rud Civilization, Kerman, Iran, Mid Third Millennium BC BY Massimo Vidale, Nasir Eskandari, Mojgan Shafiee, Irene Caldana & Francois Desset

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- Crafting Idiosyncrasies. Early Social Complexity, Ivory and Identity-Making in Copper Age Iberia by Miriam Luciañez-Triviño, Leonardo García Sanuún & Thomas Schuhmacher

- The Evolution of Complementary Cognition: Humans Cooperatively Adapt and Evolve through a System of Collective Cognitive Search BY HELEN TAYLOR, BRICE FERNANDES & SARAH WRAIGHT
- Cyprus, Sardinia and Sicily: A Maritime Perspective on Interaction, Connectivity and Imagination in Mediterranean Prehistory by A. Bernard Knapp, Anthony Russell. & Peter van Dommelen
- The Presence of Absence: Why Does the Post-contact Rock Art of Torres Strait (Northeastern Australia) Not Include Paintings of European Ships? BY LIAM M. BRADY & JAN J. McNiven
- Social Identity and Dental Modification at the Postclassic Maya Urban Centre of Mayapan by Stanley Serafin, Marilyn A. Masson, Carlos Peraza Lope, Douglas J. Kennett & Richard J. George
- 'They are all dead that I could ask': Indigenous Innovation and the Micropolitics of the Field in Twentieth-century Southern Africa by RACHEL KING, ADELPHINE BONNEAU & DANID PEARCE
- Making Sense of the Transformation of Religious Practices: A Critical Long-term Perspective from Pre- and Proto-historic Japan By Koji Mizocuchi

#### Vol. 32 No. 2 May 2022

- On Time and Other Things: Some Cartesian Dichotomies in Antarctica BY SARAH DE BARROS VIANA HISSA
- Decapitated Heads as Elite Visual Culture in Late Shang China By DANIELA
  WOLIN
- Everyday Knowledge and Apothecary Craft: Pharmacopoeias of Ancient Northwestern Honduras By SHANTI MORELL-HART
- Aggregation, Status Competition and Levelling Mechanisms in Prehistoric Chulmun, Korea BY MINKOO KIM
- Kerbing Relations through Time: Reuse, Connectivity and Folded Time in the Viking Age BY JULIE LUND

#### Special Section: Posthuman Feminism and Archaeology

- Affirmation and Action: A Posthumanist Feminist Agenda for Archaeology by Hannah Cobb & Rachel J. Crellin
- Becoming Through Milling: Challenging Linear Economic Narratives in Medieval England By BEN JERVIS
- What Can A [Feminist] Body Do? Immanent and Emergent Capacities of Bodies at Chinchorro and Wor Barrow by Yvonne O'Dell & Oliver J.T. Harris
- Finding Difference in Emotional Communities: New Feminisms of Women's Lives in the Nineteenth Century ce and Sixth Millennium BCE BY KATE MORRIS & PENNY BICKLE
- Nomadic Subjects: Sexual Difference in Ancient and Ethnographic Studies of Pastoral Mobility By CLAUDIA CHANG
- Reflections on Posthuman Ethics. Grievability and the More-thanhuman Worlds of Iron and Viking Age Scandinavia by Marianne Hem Friksen & Kevin Kay

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- Exotica, Fashion and Immortality: The New Use of Gold in Han Dynasty China (206 BCE—CE 220) BY SHENGYU WANG
- Zimbabwe Ruins in Botswana: Settlement Hierarchies, Political Boundaries and Symbolic Statements By Thomas N. Huffman & MIKE MAIN
- Making a Mark: Process, Pattern and Change in the British and Irish Neolithic By Andrew Meirion Jones & Marta Diaz-Guardamino
- A Nuclear Generator of Clouds: Accidents and Radioactive Contamination Identified on Declassified Satellite Photographs in The Mayak Chemical Combine, Southern Urals by GRZEGORZ KJARSZYS
- Turning Art into Hammers: A Complex Biography of Palaeolithic Portable Art from Coímbre Cave (Asturias, Spain) By Paula López-Calle, Álvaro Ibero, Marcos García-Diez, Blanca Ochoa, María de Andrés-Herrero, David Álvarez-Alonso & José Yravedra
- Cultural Metallurgy—A Key Factor in the Transition from the Chalcolithic to Bronze Age in the Southern Levant BY NISSIM AMZALLAG
- Connecting Architectures across the Landscape: A Visibility and Network Analysis in the Island of Mallorca during the Late Bronze Age and Early Iron Age by Alejandra Galmés-Alba & Manuel Calvo-Trias
- The Metalworker as Social Agent: A longue durée Approach from Northwestern Iberia Atlantic Façade (Ninth–First Centuries BCE) BY SAMUEL NION-ÁLYABEZ
- Neolithization and Population Replacement in Britain: An Alternative View By JULIAN THOMAS



### McDonald Institute Publications

James Barrett (Series Editor to 30 June 2021), Matt Davies (Series Editor from January 2022) & Emma Jarman (Administrator)

McDonald publications have continued to flourish with two Monograph editions and five Conversations editions published during this two-year period.

As ever, we are indebted to the dedication of our typesetters, Ben Plumridge and Anne Chippindale, and to our printers, Short Run Press and E & E Plumridge Ltd.

The pasts and presence of art in South Africa: Technologies, ontologies and agents edited by Chris Wingfield, John Giblin & Rachel King eBook | ISBN 978-1-913344-01-6 | xiii + 206 pp. | 95 figs | 0 tables | 2020 | Conversations Series https://www.repository.cam.ac.uk/handle/1810/312809

In 2015, #RhodesMustFall generated the largest student protests in South Africa since the end of apartheid, subsequently inspiring protests and acts of decolonial iconoclasm across the globe. The performances that emerged in, through and around #RhodesMustFall make it clear how analytically fruitful Alfred Gell's notion that art is 'a system of social action, intended to change the world rather than encode symbolic propositions about it' can be, even when attempting to account for South Africa's very recent history.

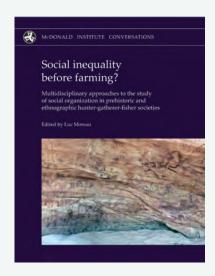
What light can this approach shed on the region's far longer history of artistic practices? Can we use any resulting insights to explore art's role in the very long history of human life in the land now called South Africa? Can we find a common way of talking about 'art' that makes sense across South Africa's long span of human his-

tory, whether considering engraved ochre, painted rock shelters or contemporary performance art? This collection of essays has its origins in a conference with the same title, arranged to mark the opening of the British Museum's major temporary exhibition South Africa: the art of a nation in October 2016. The volume represents an important step in developing a framework for engaging with South Africa's artistic traditions that begins to transcend nineteenth-century frameworks associated with colonial power.

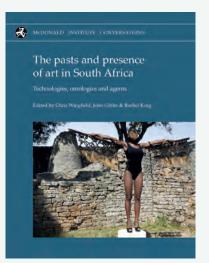
Social inequality before farming? Multidisciplinary approaches to the study of social organization in prehistoric and ethnographic hunter-gatherer-fisher societies edited by Luc Moreau

eBook | ISBN 978-1-913344-00-9 | xii + 320 pp. | 57 figs | 25 tables | 2020 | Conversations Series https://www.repository.cam.ac.uk/handle/1810/313515

Archaeological investigations over the past 50 years have challenged the importance of domestication and food production in the emergence of institutionalized social inequality. Social inequality in the prehistoric human past developed through multiple historical processes that operate on a number of different scales of variability (e.g., social, economic, demographic, and environmental). However, in the theoretical and linguistic landscape of social inequality, there is no clear definition of what social inequality is. The lifeways of huntergathererfisher societies open a crucial intellectual space and challenge to find meaningful ways of using archaeological and ethnographic data to understand what social inequality exactly is with regard to variously negotiated or enforced



cultural norms or ethoses of individual autonomy. This interdisciplinary edited volume gathers together researchers working in the fields of prehistoric archaeology and cultural and evolutionary anthropology. Spanning terminal Pleistocene to Holocene archaeological and ethnographic contexts from across the globe,



the nineteen chapters in this volume cover a variety of topics organized around three major themes, which structure the book: 1) social inequality and egalitarianism in extant hunter-gatherer societies; 2) social inequality in Upper Palaeolithic Europe (c. 45,000–11,500 years ago); 3) social inequality in prehistoric Holocene hunter-gatherer-fisher societies globally. Most chapters in this volume provide empirical content with considerations of subsistence ecology, demography, mobility, social networks, technology, children's enculturation, ritual practice, rock art, dogs, warfare, lethal weaponry, and mortuary behaviour. In addition to providing new data from multiple contexts through space and time, and exploring social diversity and evolution from novel perspectives, the collection of essays in this volume will have a considerable impact on how archaeologists define and theorize pathways both towards and away from inequality within diverse social contexts.

Temple Landscapes: Fragility, change and resilience of Holocene environments in the Maltese Islands edited by Charles French, Chris O. Hunt, Reuben Grima, Rowan McLaughlin, Simon Stoddart & Caroline Malone

(Volume 1 of Fragility and Sustainability – Studies on Early Malta, the ERC-funded FRAGSUS project)

edited by Charles French, Chris O. Hunt, Reuben Grima, Rowan McLaughlin, Simon Stoddart and Caroline Malone

Hardback | £65.00 / US \$86.00 | ISBN 978-1-902937-98-4 | xxiv + 569 pp. | 171 figs | 87 tables | 2020 |

eBook | ISBN 978-1-902937-99-1 | xxiv + 569 pp. | 171 figs | 104 tables | 2020 | Monographs Series https://www.repository.cam.ac.uk/handle/1810/312497

The ERC-funded FRAGSUS Project (Fragility and sustainability in small island environments: adaptation, cultural change and collapse in prehistory, 2013–18), led by Caroline Malone (Queens University Belfast) has explored issues of environmental fragility and Neolithic social resilience and sustainability during the

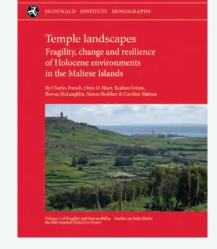
Holocene period in the Maltese Islands. This, the first volume of three, presents the palaeoenvironmental story of early Maltese landscapes.

The project employed a programme of high-resolution chronological and stratigraphic investigations of the valley systems on Malta and Gozo. Buried deposits extracted through coring and geoarchaeological study yielded rich and chronologically controlled data that allow an important new understanding of environmental change in the islands. The study combined AMS radiocarbon and OSL chronologies with detailed palynological, molluscan and geoarchaeological analyses. These enable environmental reconstruction of prehistoric landscapes and the changing resources exploited by the islanders between the seventh and second millennia bc. The interdisciplinary studies combined with excavated economic and environmental materials from archaeological sites allows Temple landscapes to examine the dramatic and damaging impacts made by the first farming communities on the islands' soil and resources. The project reveals the remarkable resilience of the soil-vegetational system of the island landscapes, as well as the adaptations made by Neolithic communities to harness their productivity, in the face of climatic change and inexorable soil erosion. Neolithic people evidently understood how to maintain soil fertility and cope with the inherently unstable changing landscapes of Malta. In contrast, second millennium bc Bronze Age societies failed to adapt effectively to the long-term aridifying trend so clearly highlighted in the soil and vegetation record. This failure led to severe and irreversible erosion and very different and short-lived socio-economic systems across the Maltese islands.

Temple Places: Excavating cultural sustainability in prehistoric Malta edited by Caroline Malone, Reuben Grima, Rowan McLaughlin, Eóin W. Parkinson, Simon Stoddart & Nicholas Vella

(Volume 2 of Fragility and Sustainability – Studies on Early Malta, the ERC-funded FRAGSUS project) Hardback | £65.00 / US \$86.00 | ISBN 978-1-913344-02-3 | xl + 512 pp. | 475 figs | 230 tables | 2020 |

eBook | ISBN 978-1-913344-03-0 | xl + 512 pp. | 475 figs | 230 tables | 2020 | Monographs Series https://www.repository.cam.ac.uk/handle/1810/315523



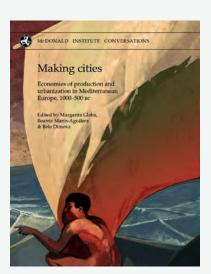
The ERC-funded FRAGSUS Project (Fragility and sustainability in small island environments: adaptation, culture change and collapse in prehistory, 2013–18) led by Caroline Malone (Queen's University Belfast) has focused on the unique Temple Culture of Neolithic Malta, and its antecedents and successors through investigation of archaeological sites and monuments. This, the second volume of three, presents the results of excavations at four temple sites and two settlements, together with analysis of chronology, economy and material culture. The project focused on the integration of three key strands of Malta's early human history (environmental change, human settlement and population) set against a series of questions that interrogated how human activity impacted on the changing natural environment and resources, which in turn impacted on the Neolithic populations. The evidence from early sites together with the human story preserved in burial remains reveals a dynamic and creative response over millennia. The scenario that emerges implies settlement from at least the mid-sixth millennium BC, with extended breaks in occupation, depopulation and environmental stress coupled with episodes of recolonization in response to changing economic, social and environmental opportunities.



Excavation at the temple site of Santa Verna (Gozo) revealed an occupation earlier than any previously dated site on the islands, whilst geophysical and geoarchaeological study at the nearby temple of Ġgantija revealed a close relationship with a spring, Neolithic soil management, and evidence for domestic and economic activities within the temple area. A targeted excavation at the temple of Skorba (Malta) revisited the chronological questions that were first revealed at the site over 50 years ago, with additional OSL and AMS sampling. The temple site of Kordin III (Malta) was explored to identify the major phases of occupation and to establish the chronology, a century after excavations first revealed the site. Settlement archaeology has long been problematic in Malta, overshadowed by the megalithic temples, but new work at the site of Tac-Cawla (Gozo) has gathered significant economic and structural evidence revealing how subsistence strategies supported agricultural communities in early Malta. A study of the second millennium BC Bronze Age site of In-Nuffara (Gozo) likewise has yielded significant economic and chronological information that charts the declining and changing environment of Malta in late prehistory.

Making Cities. Economies of production and urbanisation in Mediterranean Europe 1000–500 BCE edited by Margarita Gleba, Bela Dimova & Beatriz Marín-Aguilera eBook | ISBN 978-1-913344-06-1 | xvii + 454 pp. | 231 figs | 22 tables | 2021 | Conversations Series: https://www.repository.cam.ac.uk/handle/1810/328683

Large and complex settlements appeared across the north Mediterranean during the period 1000–500 bc, from the Aegean basin to Iberia, as well as north of the Alps. The region also became considerably more interconnected. Urban life and networks fostered new consumption practices, requiring different economic and social structures to sustain them. This book considers the emergence of cities in Mediterranean Europe, with a focus on the economy. What was distinctive about urban lifeways across the Mediterranean? How did different economic activities interact, and how did they transform power hierarchies? How was urbanism sustained by economic structures, social relations and mobility? The authors bring to the debate recently excavated sites and regions that may be unfamiliar to wider (especially Anglophone) scholarship, alongside fresh reappraisals of well-known



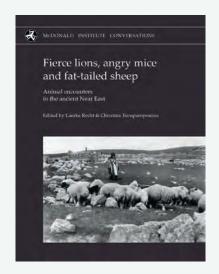
cities. The variety of urban life, economy and local dynamics prompts us to reconsider ancient urbanism through a comparative perspective.



Fierce Lions, Angry Mice and Fat-tailed Sheep: Animal encounters in the ancient Near East edited by Laerke Recht & Christina Tsouparopoulou eBook | ISBN 978-1-913344-05-4 | xiii + 289 pp. | 99 figs | 20 tables | 2021 | Conversations Series: https://www.repository.cam.ac.uk/handle/1810/328718

Animals have always been an integral part of human existence. In the ancient Near East, this is evident in the record of excavated assemblages of faunal remains, iconography and – for the later historical periods – texts. Animals have predominantly been examined as part of consumption and economy, and while these are important aspects of society in the ancient Near East, the relationships between humans and animals were extremely varied and complex.

Domesticated animals had great impact on social, political and economic structures – for example cattle in agriculture and diet, or donkeys and horses in transport, trade and war. Fantastic mythological beasts such as lion-headed eagles or Anzu-birds in Mesopotamia or Egyptian deities such as the falcon-headed god Horus were part of religious beliefs and myths, while exotic creatures such as li-



ons were part of elite symbolling from the fourth millennium bc onward. In some cases, animals also intruded on human lives in unwanted ways by scavenging or entering the household; this especially applies to small or wild animals. But animals were also attributed agency with the ability to solve problems; the distinction between humans and other animals often blurs in ritual, personal and place names, fables and royal ideology. They were helpers, pets and companions in life and death, peace and war. An association with cult and mortuary practices involves sacrifice and feasting, while some animals held special symbolic significance. This volume is a tribute to the animals of the ancient Near East (including Mesopotamia, Anatolia, the Levant and Egypt), from the fourth through first millennia bc, and their complex relationship with the environment and other human and nonhuman animals. Offering faunal, textual and iconographic studies, the contributions present a fascinating array of the many ways in which animals influence human life and death, and explore new perspectives in the exciting field of human-animal studies as applied to this part of the world.

Gardening Time: Monuments and landscape from Sardinia, Scotland and Central Europe in the very long Iron Age edited by Simon Stoddart, Ethan D. Aines & Caroline Malone

eBook | ISBN 978-1-913344-04-7 | xxii + 242 pp. | 96 figs | 5 tables | 2021 | Conversations Series: https://www.repository.cam.ac.uk/handle/1810/334083

Gardening may seem worlds away from Nuraghi and brochs, but tending a garden is a long process involving patience, accretion and memory. Scholars argue that memories are also cultured, developed and regained. The monuments in Scotland and Sardinia are testament to the importance of memory and its role in maintaining social relations. This collection of twenty-one papers addresses the theme of memory anchored to the enduring presence of monuments, mainly from Scotland and Sardinia, but also from Central Europe and the Balkans.

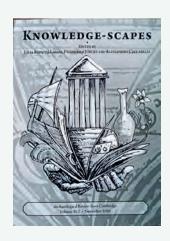


## Archaeological Review from Cambridge

GENERAL EDITOR 2021–22: GLYNNIS MAYNARD

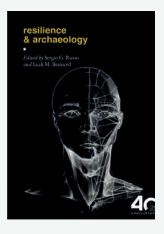
Over the past two years, the ARC has managed to weather considerable publishing delays caused by the global pandemic. The ARC continued to welcome new general and committee members in a largely virtual capacity, who have brought renewed energy and drive to the organization, including an ongoing Digitization Project to make every ARC issue open access via the University Library's Apollo Repository. We published four volumes in total during this period and currently have two volumes in production. A new ARC website is also in the works and will be live before the start of the 2022–23 academic year. Two other General Editors served through this period: Friederike Jürke (February–June 2021) and Sergio Russo (June–November 2021).

Edited by Julia Montes-Landa, Friederike Jürcke and Alessandro Ceccarelli, Volume 35(2) 'Knowledge-scapes' was launched in November 2020. The volume discusses the origins, development and use of knowledge-scapes in the fields of cognitive theory and archaeology, explored through a wide range of papers, from Early Pleistocene Olduwan and Acheulean lithic assemblages to Halloumi production in Cyprus. The virtual launch was well attended and featured



a fascinating presentation by DrTim Ingold (University of Aberdeen).

Volume 36(1) 'Resilience & Archaeology', edited by Sergio G. Russo and Leah M. Brainerd, aims at providing a broader, pluralist perspective on resilience. It consciously places human agency into discourses on past disturbances and post-stressor events. The volume offers case studies that not only explore the effects of environmental hazards on past societies but also those of cultural change, for instance, through language and social practices. The editors virtually launched the volume in



May 2021, with an introduction by Dr Erik Gjesfjeld (Templeton Foundation) and keynote by Dr Charles Redman (Arizona State University).



Virtually launched in November 2021, Volume 36(2) 'Text & Image', edited by Elisa Scholz and Glynnis Maynard, featured contributions from 10 authors in early career stages covering a variety of chronological periods and regions of the world. In offering new perspectives on old questions, this volume explores the very wide range of ways in which humans have thought of, employed, and exploited the interaction between text and image. Dr Stephen Houston (Brown

University) presented a very engaging lecture to over 60 virtual attendees on disguised scripts and picture play.



The most recent publication in May 2022, Volume 37(1) 'Rethinking the Archaeology-Heritage Divide', edited by Alisa Santikarn, Elifgül Doğan, Oliver Antczak, Kim Eileen Ruf, and Mariana P.L. Pereira, examines the current institutional and ideological relationships between Archaeology and Heritage. With seven contributions as well as two commentaries by Dr Shadreck Chirikure (University of Cape Town) and Dr Marie Louise Stig Sørensen (University of

Cambridge), the volume reconceptualises the contested nature of engagement between these two disciplines. It aims to develop a more ethical and decolonised study of the past.

The ARC committee thanks the contributing authors and anonymous peer reviewers. We are also hugely grateful for the considerable ongoing support from the McDonald Institute for Archaeological Research and the Cambridge Department of Archaeology.



## Members'/Fellows' Publications

#### GRAEME BARKER

- 2020 (with L. Farr & R. Inglis). Sedimentary and human responses to aridity in Mediterranean caves, in Not Just a Corridor: Human occupation of the Nile Valley and neighbouring regions between 75,000 and 15,000 years ago, eds A. Leplongeon, M. Goder-Goldberger & D. Pleurdeau. Paris: Musée National d'Histoire Naturelle. 203–19.
- 2021 (with M. Lin, F. Luan, H. Fang, et al.) Bulls for sacrifice, cows for work? Morphometric models suggest that female cattle were used for traction in the Chinese Bronze Age Late Shang dynasty (ca. 1300–1046 BCE). Holocene. DOI: 10.1177/0959683621104997
- 2022 Living with risk in drylands: archaeological perspectives. Holocene (special issue 'Risky Business: Comparative approaches to risk and resilience in arid landscapes', eds A. Damick, C. Weinberg & E. Dawson). DOI: 10.1177/095968362211226
- 2022 (with T. Reynolds, C. Hunt, E. Hill, E. Tilby, E. Pomeroy & A. Burke). Le Moustérien du Zagros: une vision synthétique à partir de la grotte de Shanidar. L'Anthropologie 126(3), 103045.
- 2022 (with E. Tilby & P. Miracle) The microvertebrates of Shanidar Cave: preliminary taphonomic findings. Quaternary 5(1) (special issue 'Taphonomy and Palaeoecology of Quaternary Vertebrates: Advances in fossil and experimental studies'. DOI: 10.3390/quat5010004

#### Amélie Beaudet

- 2021 The enigmatic origins of the human brain. *Science* 372(6538), 124–5.
- 2021 (*with* R.C. Atwood, W. Kockelmann, V. Fernandez, *et al.*). Preliminary paleohistological observations of the StW 573 ('Little Foot') skull. *eLife* 10, e64804.
- 2021 (with F. Bouchet, A. Urciuoli, M. Pina, et al.). Comparative anatomy of the carotid canal in the Miocene small-bodied catarrhine *Pliobates cataloniae*. Journal of Human Evolution 161, 103073.
- 2021 (with K.J. Carlson, D.J. Gree, T. Jashashvili, et al.). The pectoral girdle of StW 573 ('Little Foot') and its implications for shoulder evolution in the Hominina. Journal of Human Evolution 158, 102983.
- 2021 (with R.H. Crompton, J. Clymont, S. Elton, et al.). StW 573 Australopithecus prometheus: its significance for an Australopith Bauplan. Folia Primatologica 92, 243–75.
- 2021 (with R. Holloway & S. Benazzi). A comparative study of the endocasts of OH 5 and SK 1585: implications for the paleoneurology of eastern and southern African Paranthropus. Journal of Human Evolution 156, 103010.

- 2021 (with A. Urcioli, C. Zanolli, S. Almécija, et al.). Reassessment of the phylogenetic relationships of the late Miocene apes Hispanopithecus and Rudapithecus based on vestibular morphology. Proceedings of the National Academy of Sciences of USA, 118(5), e2015215118.
- 2021 (with A. Urcioli, C. Zanolli, M. Pina, et al.). A comparative analysis of the vestibular apparatus in *Epipliopithecus vindobonensis*: phylogenetic implications. *Journal of Human Evolution* 151, 102930.
- 2022 (with L. Backwell, L. Wadley, F. d'Errico, et al.). Border Cave: a 227,000-year-old archive from the southern African interior. Quaternary Science Reviews 291, 107597.
- 2022 (with F. d'Errico, L. Backwell, L. Wadley, et al.). A reappraisal of the Border Cave 1 cranium (KwaZulu-Natal, South Africa). Quaternary Science Reviews 282, 107452.
- 2022 (with E. de Jager, L. Prigge, N. Amod & A. Oettlé). Exploring the relationship between soft and hard tissues: the example of vertebral arteries and transverse foramina. *Journal of Anatomy* 241(2), 447–52.
- 2022 (with E.J. de Jager, L. Risser, M. Mescam & C. Fonta). Sulci 3D mapping from human cranial endocasts: A powerful tool to study hominin brain evolution. Human Brain Mapping 43(14), 4433–43.
- 2022 (with C. Zanolli, T.W. Davies, R. Joannes-Boyau, et al.). Dental data challenge the ubiquitous presence of Homo in the Cradle of Humankind. Proceedings of the National Academy of Sciences of USA, 119(28), e2111212119.

#### MICHAEL BOYD

- 2021 (ed. with R.C.P. Doonan). Far From Equilibrium: An archaeology of energy, life and humanity. Oxford: Oxbow. And chapters therein: (with R.C.P. Doonan) (Re) placing humanity? Responses to the crisis in archaeology, 3–15; (with C. Renfrew) Project design and implementation: reflections on Framework. 225–37.
- 2021 (with C. Renfrew). Keros, in Encyclopedia of Ancient History, eds. A. Erskine, D.B. Hollander & A. Papaconstantinou. Wiley Online Library. DOI: 10.1002/9781444338386.wbeah02094.pub3
- 2021 (with C. Renfrew, I. Legaki, E. Margaritis, G. Gavalas, I. Moutafi & A. Krijnen). Νέες ανασκαφές στην Κέρο, 2016–2017, in Naxos (Ancient, Byzantine and under Latin rule, Early Modern and Modern, Contemporary), ed. V. Fragoulopoulos. Naxos: Dimos Naxou kai Mikron Kykladon, 87–102.
- 2021 (with R.R. Campbell, R. Doonan, C. Douglas, et al.). Open area, open data: advances in reflexive archaeological practice. *Journal of Field Archaeology* 46(2), 62–80.

2022 (with M. Gkouma, G. Tsartsidou, E. Margaritis, I. Moutafi & C. Renfrew). Tracing the missing fragments of Cycladic architecture: a geo-ethnoarchaeological study on the degradable architectural elements of the Cyclades. Archaeological and Anthropological Sciences 14, article 198.

#### KATHERINE BOYLE

2021 (with L. Moreau, C. Draily, J.-M. Cordy, et al.). Adaptive trade-offs towards the Last Glacial Maximum in north-western Europe: a multidisciplinary view from Walou Cave. Journal of Paleolithic Archaeology 4, 11.

#### CYPRIAN BROODBANK

2021 (with G. Lucarini & Y. Bokbot). New light on the silent millennia: Mediterranean Africa, ca. 4000–900 BC. African Archaeological Review 38(1) 147–64.

#### EMMA BROWNLEE

- 2021 Grave goods in early medieval Europe: regional variability and decline. *Internet Archaeology* 56.
- 2021 Connectivity and funerary change in early medieval Europe. *Antiquity* 95, 142–59.
   2022 Bed burials in early medieval Europe. *Medieval Archaeology* 66(1), 1–29.

#### MATTHEW BRUDENELL

- 2022 (with R. Fosberry, T. Phillips & M. Kwiatkowska). Early cultivation of broomcorn millet in southern Britain: evidence from the Late Bronze Age settlement site of Old Catton, Norfolk. Antiquity. doi:10.15184/aqy.2022.94
- 2022 (with M. Kwiatkowska). First inroads: earlier Bronze Age activity on the Suffolk Claylands. Proceedings of the Suffolk Institute of Archaeology and History 45(2), 237–46.
- 2022 (with K. Blackbourn). Middle Iron Age settlement and ceramics at Highfields, Caldecote, Cambridgeshire. Proceedings of the Cambridge Antiquarian Society 111, 41–53.

#### KATIE CAMPBELL

- 2022 Presenting Al Zubarah archaeological site, in *Al Zubarah*, *Qatar's World Heritage City*, by M. al Thani, N. Abdulla, S. Muhesen, *et al*. Doha: Qatar University Press, 197–206.
- 2022 (with T.K. Kabora). Archival photography, UAV surveys and structure-from-motion techniques for local heritage Management, in Visual Heritage: Digital approaches in heritage science, eds E. Ch'ng, H. Chapman, V. Gaffney & A.S. Wilson. Cham: Springer. DOI: 10.1007/978-3-030-77028-0\_17
- 2022 (with A.Seraliyev, D. Naskidashvili & S. Akylbek). Urbanism under Turco-Mongol rule: excavations at Otrar, Kazakhstan. *Tsu-Ti The International Scientific Journal of Humanities* 1(1) 10.55804/TSU-ti-1/Campbell



#### GILLY CARR

- 2020 (with H. Mytum, R. Philpott & N. Saunders). 'This Camp seemed almost to be a model of its kind': the Les Blanches Banques Camp for German World War 1 Prisoners of War. Bulletin of the Société Jersiaise 32(4), 841–63.
- 2020 (with L. Willmott). A right to compensation after persecution? Examining the testimonies of British victims of Nazism, in Beyond Camps and Forced Labour: Proceedings of the Sixth International Conference, eds S. Bardgett, C. Schmidt & D. Stone. Cham: Palgrave Macmillan, 253–76.
- 2021 Campscapes and homescapes of the mind's eye: a methodology for analysing the landscapes of internment camps, in *Conflict Landscapes: Materiality and meaning in contested places*, 1900–2007, eds N. Saunders & P. Cornish. London: Routledge, 293–308.
- 2021. 'You are requested to ascertain the nationality of Jews residing in Guernsey': analysing an artefact of collaboration from the Channel Island of Guernsey, 1933–1940. *Holocaust Studies* 28(1), 95–118.
- 2022 The biographies of resistant material culture in occupied landscapes: the Channel Islands in World War II, in *Archaeologies of Cultural Contact: At the interface*, eds T. Clack & M. Brittain. Oxford: Oxford University Press, 159–77.

#### SIMON CARRIGNON

- 2020 (with T. Brughmans & I. Romanowska).

  Tableware trade in the Roman East: Exploring cultural and economic transmission with agent-based modelling and approximate Bayesian computation. PLoS One 15(11), e0240414.
- 2021 (with R.A. Bentley, D.J. Ruck, S. Valverde & M.J. O'Brien). Neutral models are a tool, not a syndrome. Nature Human Behaviour 5(7), 807–8.
- 2021 (with M.J. Silk, R.A. Bentley & N.H. Fefferman). Improving pandemic mitigation policies across communities through coupled dynamics of risk perception and infection. Proceedings of the Royal Society B: Biological Sciences 288(1955), 20210834.
- 2022 (with R.A. Bentley, J. Borycz, D.J. Ruck & M.J. O'Brien). Machine learning for rediscovering revolutionary ideas of the past. *Adaptive Behavior* 30(3), 279–86.
- 2022 (with R.A. Bentley, M.J. Silk & N.H. Fefferman). How social learning shapes the efficacy of preventative health behaviors in an outbreak. *PLoS One* 17(11), e0262505.
- 2022 (with A.J. Pritchard, M.J. Silk, R.A. Bentley & N.H. Fefferman). Balancing timeliness of reporting with increasing testing probability for epidemic data. *Infectious Disease Modelling* 7(2), 106–16.
- 2022 (with A.J. Pritchard, M.J. Silk, R.A. Bentley & N.H. Fefferman). How reported outbreak data can shape individual behavior in a social world. *Journal of Public Health Policy* 43(3), 360–78.

- 2022 (with I. Romanowska, T. Brughmans, P. Bes, et al.) A study of the centuries-long reliance on local ceramics in Jerash through full quantification and simulation. *Journal of Archaeological Method and Theory* 29, 31–49.
- 2022 (with M.J. Silk, R.A. Bentley & N.H. Fefferman). Observations and conversations: how communities learn about infection risk can impact the success of non-pharmaceutical interventions against epidemics. BMC Public Health 22, article 13.

#### CRAIG CESSFORD

- 2021 (with J.M. Dittmar, P.D. Mitchell, S.A. Inskip & J.E. Robb). Medieval injuries: skeletal trauma as an indicator of past living conditions and hazard risk in Cambridge, England. American Journal of Physical Anthropology 175(3), 626–45.
- 2021 (with J.M. Dittmar, P.D. Mitchell, S.A. Inskip & J.E. Robb). Fancy shoes and painful feet: *Hallux valgus* and fracture risk in medieval Cambridge, England. *International Journal of Paleopathology* 35, 90–100.
- 2021 (with P.D. Mitchell, J.M. Dittmar, B. Mulder, S. Inskip, A. Littlewood & J.E. Robb). The prevalence of cancer in Britain before industrialization. Cancer 127(17), 3054–9.
- 2021 (with P.D. Mitchell, J.M. Dittmar, B. Mulder, S. Inskip, A. Littlewood & J.E. Robb). Reply to Air pollution was high centuries before industrial revolutions and may have been responsible for cancer rates in medieval Britain. Cancer 127(19), 3699
- 2021 (with S. Pfrengle, J. Neukamm, M. Guellil, et al.). Mycobacterium leprae diversity and population dynamics in medieval Europe from novel ancient genomes. BMC Biology 19(1), article 220.
- 2021 (with C.L. Scheib, M. Guellil, M. Keller, C. Alexander, S. Inskip & J.E. Robb). Beyond plague pits: using genetics to identify responses to plague in medieval Cambridgeshire. European Journal of Archaeology 24(4), 496–518.
- 2021 (with J.M. Dittmar, P.D. Mitchell, P.M. Jones, B. Mulder, S.A. Inskip & J.E. Robb). Gout and 'podagra' in medieval Cambridge, England. International Journal of Paleopathology 33, 170–81.
- 2021 (with J. Robb, J. Dittmar, S.A. Inskip & P.D. Mitchell). The greatest health problem of the Middle Ages? Estimating the burden of disease in medieval England. *International Journal of Paleopathology* 34, 101–12.
- 2022 (with M. Guellil, M. Keller, J.M. Dittmar, et al.). An invasive Haemophilus influenzae serotype b infection in an Anglo-Saxon plague victim. Genome Biology 23(1), article 22.
- 2022 (with M. Guellil, L. van Dorp, S.A. Inskip, et al.). Ancient herpes simplex 1 genomes reveal recent viral structure in Eurasia. Science Advances 8(30). DOI: 10.1126/sciadv.abo443
- 2022 (with A. Hall, B. Mulder, B. Neil, et al.). Buried with their buckles on: clothed burial at the Augustinian Friary, Cambridge. Medieval Archaeology 66(1), 151–87.

- 2022 (with P.D. Mitchell, J.M. Dittmar, B. Mulder, S. Inskip, A. Littlewood & J.E. Robb). Assessing the relative benefits of imaging with plain radiographs and microCT scanning to diagnose cancer in past populations.

  International Journal of Paleopathology 36, 24–9
- 2022 (with B. Neil). The people of the Cambridge Austin friars. Archaeological Journal 179(2), 383–444.
- 2022 (with R. Newman). Thirty years of discoveries in Medieval Cambridge: archaeological investigations 1990–2010. Proceedings of the Cambridge Antiquarian Society 111, 191–206.

#### NIKHIL CHAUDHARY

- 2022 (with G.D. Salali). Hunter-gatherers, mismatch and mental misorder, in Evolutionary Psychiatry: Current perspectives on evolution and mental health, eds R. Abed & P. St John-Smith. Cambridge: Cambridge University Press, 64–83.
- 2022 (with A. Giritlioglu). Humor and hierarchy: an experimental study of the effects of humor production on male dominance, prestige and attractiveness. Humor International Journal of Humor Research 35(4), 553–86.
- 2021 (with A.E. Page, E.H. Emmott, M. Dyble, D. Smith, S. Viguier & A.B. Migliano). Children are important too: juvenile playgroups and maternal childcare in a foraging population, the Agta. Philosophical Transactions of the Royal Society of London B: Biological Sciences 376, 20200026.
- 2021 (with J.K. Knight, G.D. Salali, G. Sikka, I. Derkx & S.M. Keestra). Quantifying patterns of alcohol consumption and its effects on health and wellbeing among BaYaka huntergatherers: a mixed-methods cross-sectional study. *PLoS One* 16, 0258384.

#### MATTHEW COLLINS

- 2020 (with A.M.H. Eriksen, T.K. Nielsen, H. Matthiesen, et al.). Bone biodeterioration the effect of marine and terrestrial depositional environments on early diagenesis and bone bacterial community. PLoS One 15, 0240512.
- 2020 (with T.Z.T. Jensen, A. Sjöström, A. Fischer, et al.). An integrated analysis of Maglemose bone points reframes the Early Mesolithic of Southern Scandinavia. Scientific Reports 10, article 17244.
- 2020 (with A.L. Morton-Hayward, T. Thompson, J.E. Thomas-Oates, et al.). A conscious rethink: Why is brain tissue commonly preserved in the archaeological record? Commentary on: Petrone P, Pucci P, Niola M, et al. Heatinduced brain vitrification from the Vesuvius eruption in C.E. 79. Science and Technology of Archaeological Research 6(1), 87–95.



## Members'/Fellows' Publications (cont.)

#### MATTHEW COLLINS (cont.)

- 2020 (with A.B. Scott, A. Taurozzi, N. Hughes, et al.). Comparing biological and pathological factors affecting osteocalcin concentrations in archaeological skeletal remains. Journal of Archaeological Science: Reports 34(A), article
- 2021 (with S. Brown, K. Douka & K.K. Richter). On the standardization of ZooMS nomenclature. Journal of Proteomics 235, 104041.
- 2021 (with A.N. Coutu, A.J. Taurozzi, M. Mackie, T.Z.T. Jensen & J. Sealy). Palaeoproteomics confirm earliest domesticated sheep in southern Africa ca. 2000 BP. Scientific Reports 11(1), article 6631.
- 2021 (with S. Doherty, M.M. Alexander, J. Vnouček & J. Newton). Measuring the impact of parchment production on skin collagen stable isotope (δ13C and δ15N) values. Science and Technology of Archaeological Research 7(1), 1–12.
- 2021 (with S.P. Doherty, S. Henderson, S. Fiddyment & J. Finch). Scratching the surface: the use of sheepskin parchment to deter textual erasure in early modern legal deeds. Heritage Science 9, article 29.
- 2021 (with S. Fiddyment, N.J. Goodison, E. Brenner, S. Signorello & K. Price). Girding the loins? Direct evidence of the use of a medieval English parchment birthing girdle from biomolecular analysis. Royal Society Open Science 8(3), 202055.
- 2021 (with H. Matthiesen, A.M. Høier Eriksen & J. Hollesen). Bone degradation at five Arctic archaeological sites: Quantifying the importance of burial environment and bone characteristics. Journal of Archaeological Science 125, 105296.
- 2021 (with A.R. Perri, K.J. Mitchell, A. Mouton, et al.) Dire wolves were the last of an ancient New World canid lineage. Nature 591, 87–91.
- 2021 (with S. Presslee, K. Penkman, R. Fischer, et al.) Assessment of different screening methods for selecting palaeontological bone samples for peptide sequencing. Journal of Proteomics 230, 103986.
- 2021 (with A. Ramsøe, M. Crispin, M. Mackie, et al.). Assessing the degradation of ancient milk proteins through site-specific deamidation patterns. Scientific Reports 11, 7795.
- 2021 (with M. Ruffini-Ronzani, J.-F. Nieus, S. Soncin, et al.). A biocodicological analysis of the medieval library and archive from Orval Abbey, Belgium. Royal Society Open Science 8(6), 210210.
- 2021 (with A.K.W. Runge, J. Hendy, K.K. Richter, et al.). Palaeoproteomic analyses of dog palaeofaeces reveal a preserved dietary and host digestive proteome. Proceedings of the Royal Society B: Biological Sciences 288, 20210020.

- 2021 (with J. Sakalauskaite, M. Mackie, A.J. Taurozzi, F. Marin & B. Demarchi). The degradation of intracrystalline mollusc shell proteins: a proteomics study of Spondylus gaederopus. Biochimica et Biophysica Acta Proteins and Proteomics 1869, 140718.
- 2022 (with J.H. Bethencourt, I.R. Palomo, S. Hickinbotham, et al.). Data from 'A Biocodicological Analysis of the Medieval Library and Archive From Orval Abbey, Belgium' Journal of Open Archaeology Data 10. DOI: 10.5334/joad.89
- 2022 (with L.O. Brandt, M.R. Lillemark, M. Rytter & A.P. Tottrup). Next Generation Lab puts Denmark's past in the hands of its future. Antiquity 96, 221–8.
- 2022 (with LØ. Brandt, A.J. Taurozzi, M. Mackie, et al.) Palaeoproteomics identifies beaver fur in Danish high-status Viking Age burials – direct evidence of fur trade. PLoS One 17, 0270040.
- 2022 (with B. Chidimuro, A. Mundorff, C. Speller, et al.). Isotope analysis of human dental calculus  $\delta^{13}CO_3^{2-}$ : investigating a potential new proxy for sugar consumption. Rapid Communications in Mass Spectrometry 36(11), e9286.
- 2022 (with B. Demarchi, J. Stiller, A. Grealy, et al.). Ancient proteins resolve controversy over the identity of Genyornis eggshell. Proceedings of the National Academy of Sciences of USA, 119(43), e2109326119.
- 2022 (with S.P. Doherty, A.J.T. Harris, A. Sistiaga, J. Newton & M.M. Alexander). A modern baseline for the paired isotopic analysis of skin and bone in terrestrial mammals. *Royal Society Open Science* 9, 211587.
- 2022 (with B. Fonseca & C.L. Freeman).
  Conformational analysis and water dynamics: a molecular dynamics study on the survival of a β-lactoglobulin peptide in the archaeological record. Chemical Physics 561, 111602.
- 2022 (with C. Hofmann, J. Vnouček, S. Rabitsch, et al.). The Vienna Genesis: an example of Late Antique purple parchment. Restaurator 43(1–2). 3–33.
- 2022 (with I. Kontopoulos, K. Van de Vijver, B. Robberechts, M. von Tersch, G. Turner-Walker & K. Penkman). Histological and stable isotope analysis of archeological bones from St. Rombout's cemetery (Mechelen, Belgium): intrasite, intraindividual, and intrabone variability. International Journal of Osteoarchaeology 32(5), 1142–56.
- 2022 (with C. Warinner & K. Korzow Richter). Paleoproteomics. *Chemical Reviews* 122(16), 13401–46.

#### ENRICO CREMA

- 2021 (with A. Bevan). Inference from large sets of radiocarbon dates: software and methods. *Radiocarbon* 63, 23–39.
- 2021 (with A. Bevan). Modifiable reporting unit problems and time series of long-term human activity. *Philosophical Transactions of the Royal Society B* 376(1816), 20190726.

- 2021 (with A. Brown). Maori population growth in pre-contact New Zealand: regional population dynamics inferred from summed probability distributions of radiocarbon dates. Journal of Island and Coastal Archaeology 16(2–4), 572–90
- 2021 (with R.J. Di Napoli, C.P. Lipo, T.M. Rieth & T.L. Hunt). Approximate Bayesian computation of radiocarbon and paleoenvironmental record shows population resilience on Rapa Nui (Easter Island). Nature Communications 12, article 3939
- 2021 (with H. Kim & G.A. Lee). Bayesian analyses question the role of climate in Chulmun demography. Scientific Reports 11, article 23797.
- 2021 (with S. Shoda). A Bayesian approach for fitting and comparing demographic growth models of radiocarbon dates: a case study on the Jomon-Yayoi transition in Kyushu (Japan). *PLoS One* 16(5), e0251695.
- 2022 Statistical inference of prehistoric demography from frequency distributions of radiocarbon dates: a review and a guide for the perplexed. *Journal of Archaeological Method and Theory* 29, 1387–1418.
- 2022 (with D.J. Bradford). Risk factors for the occurrence of sexual misconduct during archaeological and anthropological fieldwork. American Anthropologist 124(3),548–59.
- 2022 (with M. Krzyzanska, V.H. Hunt & M.K. Jones). Modelling the potential ecological niche of domesticated buckwheat in China: archaeological evidence, environmental constraints and climate change. Vegetation History and Archaeobotany 31, 331–45.
- 2022 (with A.M. Prentiss, K. Edinborough, I. Kuijt, et al.). Divergent population dynamics in the middle to late Holocene lower Fraser valley and mid-Fraser canyon, British Columbia. Journal of Archaeological Science: Reports 44, 103512.
- 2022 (with F. Silva, F. Coward, L. Davies, et al.). Developing transdisciplinary approaches to sustainability challenges: the need to model socio-environmental systems in the longue durée. Sustainability 14(16), 10234.
- 2022 (with C.J. Stevens & S. Shoda). Bayesian analyses of direct radiocarbon dates reveal geographic variations in the rate of rice farming dispersal in prehistoric Japan. Science Advances 8(38), eadc9171.

#### KINGSLEY DARAOJIMBA

- 2021 Archaeology Education in Igbo-Ukwu, South East Nigeria. *Archaeologies* 17(2), 193–216
- 2021 (with C.F.P.D. Luz & M.A.D. Barros). Environmental and vegetation dynamics in the forest of Orile-Owu, southwest Nigeria, from the last ~ 1,4 k cal yr BP. Hoehnea 48. DOI: 10.1590/2236-8906-41/2021



2021 (with A. Ogundiran, O. Moyib & E. Adeara). Methodological protocols for understanding decomposed mud wall residential structures in Oyo-lle (c. 1570–1837), Nigeria. South African Archaeological Bulletin 76(214), 43–56.

#### PALOMA DE LA PEÑA

- 2021 Forum comment on the paper: Vaesen, K and Houkes, W, 2021. Is human culture cumulative? *Current Anthropology* 62(2), 218–38.
- 2021 (with G. Amorós, J.S. Carrión, J. Ochando, et al.). Paleoecology and paleoart: landscapes of the Middle Pleistocene Neanderthals in Bolomor Cave, eastern Iberia. Quaternary Science Reviews 256, 106826.
- 2021 (with A. Val, M. Duval, S. Bansal, et al.).
  The place beyond the trees: renewed excavations of the Middle Stone Age deposits at Olieboomspoort in the Waterberg Mountains of the South African Savanna Biome. Archaeological and Anthropological Sciences 13, article 116.
- 2022 Impresiones sobre los estudios de industria lítica en la década de los años veinte del siglo XXI. Arkeogazte Aldikaria 12, 25–39.
- 2022 (with L. Backwell, L. Wadley, F. d'Errico, et al.). Border Cave: A 227,000-year-old archive from the southern African interior. Quaternary Science Reviews 291, 107597.
- 2022 (with A. Beaudet, F. d'Errico, L. Backwell, et al.). A reappraisal of the Border Cave 1 cranium (KwaZulu-Natal, South Africa). Quaternary Science Reviews 282, 107452.
- 2022 (with A. Prieto, X. Aldea-Moreira, M. Arzarello, et al.). How to deal with an elephant in the room? Understanding 'non-flint' raw materials: characterisation and technological organisation. Arkeogazte Aldikaria 12, 73–98.
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#### GUY JACOBS

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#### LILIANA JANIK

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## Members'/Fellows' Publications (cont.)

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#### MARTIN JONES

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#### JODY JOY

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#### ALASTAIR KEY

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#### Marcos Martinón-Torres

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#### JIANJUN **M**EI

- 2020 (with T. Tsukahara). Putting Joseph Needham in the East Asian context: commentaries on papers about the reception of Needham's works in Korea and Taiwan. East Asian Science, Technology and Society 14(2), 403–10.
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#### STEFANIA MERLO

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## Members'/Fellows' Publications (cont.)

#### MARTIN MILLETT

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#### Douglas Momberg

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#### TAMSIN O'CONNELL

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#### NIK PETEK-SARGEANT

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#### CAMERON PETRIE

22020 Resistance at the Edge of Empires. The archaeology and history of the Bannu Basin (Pakistan) from 1000 BC to AD 1200. Oxford: Oxbow.

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#### REBECCA ROBERTS

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#### CHRISTIANA SCHEIB

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#### Marie Louise Stig Sørensen

- 2020 (ed. with B. Baillie). African Heritage Challenges. London: Palgrave. And chapter therein: (with B. Baillie) Heritage challenges in Africa: contestations and expectations, 1–43.
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#### **CHRISTOPHER STEVENS**

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## Members'/Fellows' Publications (cont.)

#### **CHRISTOPHER STEVENS** (CONt.)

- 2022 (with E.R. Crema & S. Shoda). Bayesian analyses of direct radiocarbon dates reveal geographic variations in the rate of rice farming dispersal in prehistoric Japan. Science Advances 8(38), eadc9171.
- 2022 (with Y. Xue, R. Dal Martello, L. Qin, R. Min & D.Q Fuller). Post-Neolithic broadening of agriculture in Yunnan, China: archaeobotanical evidence from Haimenkou. Archaeological Research in Asia 30, 100364.

#### SIMON STODDART

- 2020 *Power and Place in Etruria.* Cambridge: Cambridge University Press.
- 2020 (ed. with F. French, C.O. Hunt, R. Grima, R. McLaughlin & C. Malone). Temple Landscapes: Fragility, change and resilience of Holocene environments in the Maltese Islands. Cambridge: McDonald Institute for Archaeological Research.
- 2020 (ed. with C. Malone, R. McLaughlin, E. Parkinson & R.Grima). Temple Places: Excavating cultural sustainability in prehistoric Malta. Cambridge: McDonald Institute for Archaeological Research.
- 2020 Untold riches of the urban form central to the Pre-Roman European experience, in *Crossing the Alps: Early urbanism between northern Italy and central Europe (900–400 BC)*, eds L. Zamboni, M. Fernández-Götz & C. Metzner-Nebelsick. Leiden: Sidestone Press, 423–30.
- 2020 (with F. Fulminante). Infancy and childhood in funerary contexts of Early Iron Age Middle Tyrrhenian Italy: a comparative approach, in *Children in Antiquity*, eds L. Beaumont, M. Dillon & N. Harrington. London: Routledge, 488–505.
- 2020 (with E.W. Parkinson, T.R. McLaughlin, C. Brogan & C. Malone). Storied structures and sustainability in late Neolithic Malta: excavations at the Santa Verna megalithic site, Gozo, in Monumentalizing Life in Neolithic Europe: Narratives of change and continuity, eds A.B. Gebauer, L. Sørensen, A. Teather & A.C. Valera. Oxford: Oxbow. 229-38.
- 2021 (ed. with E. Aines & C. Malone).

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- 2021 (with L. Ceccarelli). Perugia: the frontier city, in Making Cities: Economies of production and urbanisation in Mediterranean Europe 1000–500 BCE, eds J. Cutler, B. Dimova, B. Marin Aguilera & M. Gleba. Cambridge: McDonald Institute for Archaeological Research, 161–75.
- 2021 (with J.E. Thompson, R.K. Power, B. Mercieca-Spiteri, et al.). Analysis of periosteal lesions from commingled human remains at the Xagħra Circle hypogeum reveals the first case of probable scurvy from Neolithic Malta. International Journal of Osteoarchaeology. DOI: 10.1002/oa.3040
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#### MATTHEW TEASDALE

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#### **CARMEN TING**

- 2020 (with J. Źrałka, C. Helmke, B. Hermes, et al.). Political alliances and trade connections observed in the ceramic record of the Classic period: the perspective from the Maya site of Nakum, Guatemala. Ancient Mesoamerica 31(3), 461–75.
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#### CHRISTINA TSOUPAROPOULOU

- 2020 (with N. Highcock). The construction of women's identities through commemorative objects in Bronze Age Mesopotamia.

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- 2021 (ed. with L. Recht). Fierce Lions, Angry Mice and Fat-tailed Sheep: Animal encounters in the ancient Near East. Cambridge: McDonald Institute for Archaeological Research.

#### DACIA VIEJO ROSE

- 2021 Património cultural em conflito: da violência à reparação, in *Patrimónios Contestados*, eds M. Bandeira Jerónimo & W. Rossa. Lisbon: Público, 10–25.
- 2021 Cultural violence against heritage: process, experience, and impact, in *Experiencing Violence*. London: British Academy, 41–8.
- 2022 Heritage and the (re)shaping of social identities in conflict cycles. Anchor or quicksand?, in Cultural Heritage. Past, Propaganda, Parade, eds T. Clack & M. Dunkley. London: Routledge, 28–49.
- 2022 The Deliberate Destruction of Cultural Heritage and How (Not) to Repair It. Items. Social Sciences Research Council. https://items.ssrc.org/where-heritage-meets-violence/the-deliberate-destruction-of-cultural-heritage-and-how-not-to-repair-it/

#### ASHLEIGH WISEMAN

- 2022 (with O.E. Demuth, E. Pomeroy & I. De Groote). Reconstructing articular cartilage in the Australopithecus afarensis hip joint and the need for modelling six degrees of freedom. Integrative Organismal Biology 4(1), obac031.
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#### ROBERT WISEMAN

- 2020 Embodied simulation, conceptual metaphor, and archaeological interpretation: a reply to Gibbs. Current Anthropology 61(6) 796–7.
- 2021 (with M.J. Allen & C. Gibson). The inverted dead of Britain's Bronze Age barrows: a perspective from Conceptual Metaphor Theory. Antiquity 95, 720–34.













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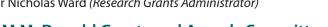
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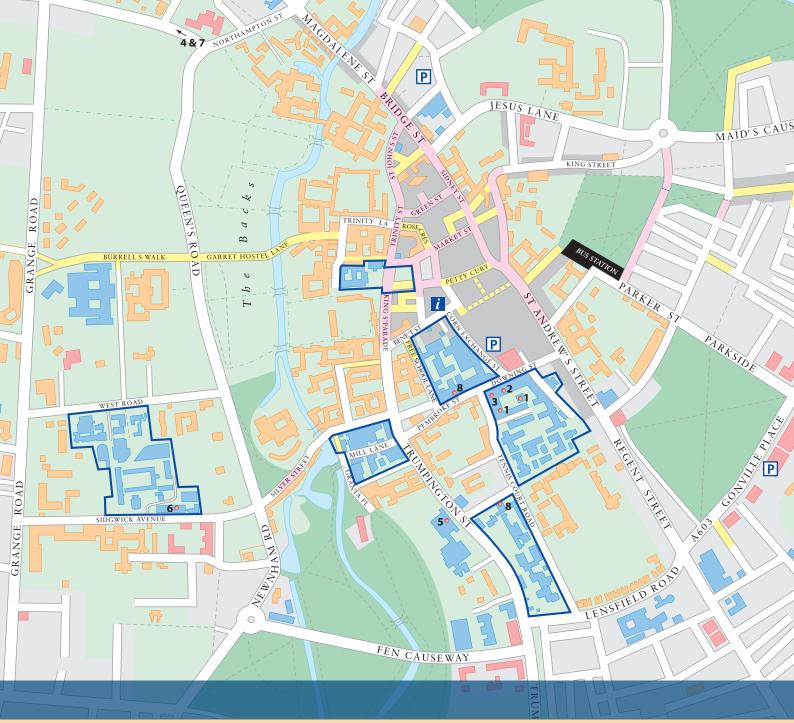
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**Cover**: Saltanat Amirova holds a gold ram, one of hundreds of 2500-year-old gold artefacts from the burial mounds of the Saka people of East Kazakhstan which were unearthed on the plains of Kazakhstan during lockdown. (Photograph: © Alamy.)