The Prehistoric Society

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PAST

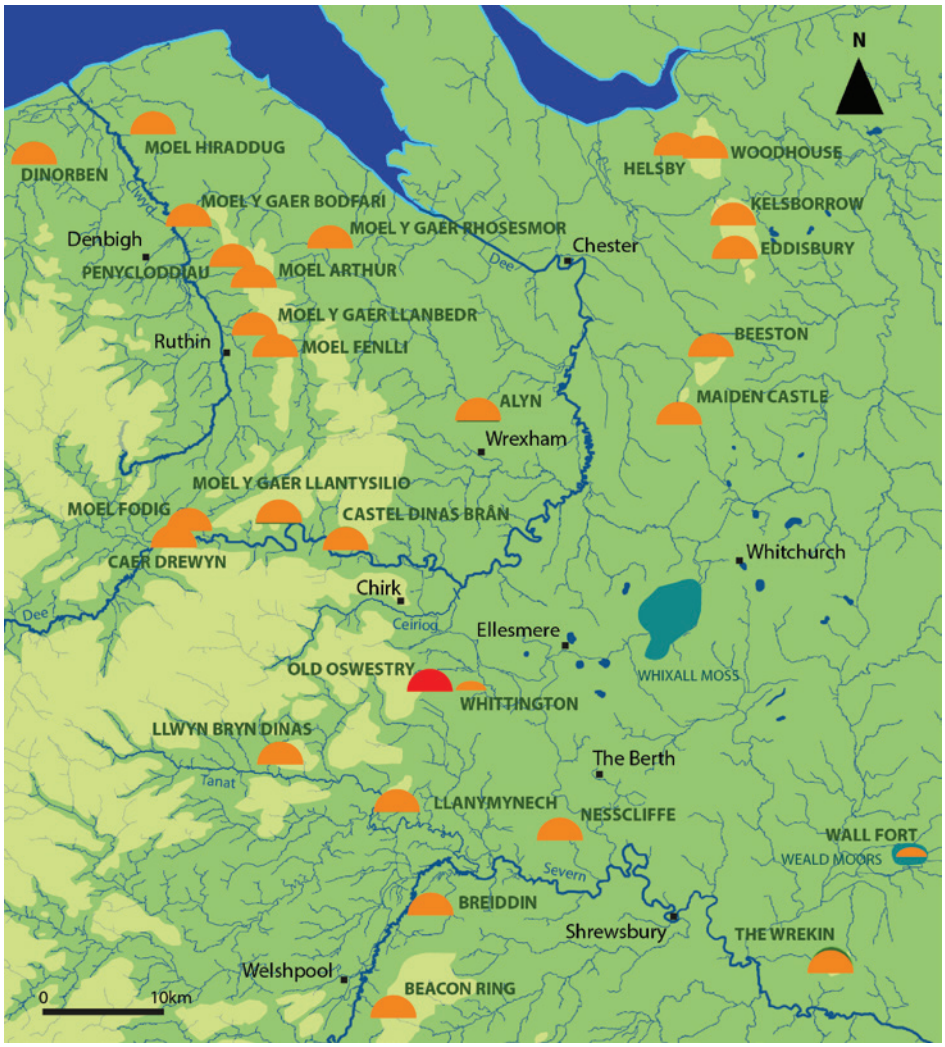
THE NEWSLETTER OF THE PREHISTORIC SOCIETY

Old Oswestry Hillfort, Shropshire

Old Oswestry multi-vallate enclosure is located just to the north of the present town, on an easily accessible glacial mound situated at the juncture of the Midland Plain and the Welsh hills, and midway between the Dee and Severn river valleys. Described by Sir Cyril Fox as "the outstanding work of Early Iron Age type on the Marches of Wales", its distinctive features have been used to illustrate many a publication on hillforts and for syntheses of the Iron Age, particularly emphasising the monumental scale and extremely unusual, if not unique, western ramparts which incorporate five or six cells or 'ponds'. In 1946 Lord Harlech gave it to the nation to be held in guardianship, and the oak and ash trees that had covered its earthworks for hundreds of years were cut down.

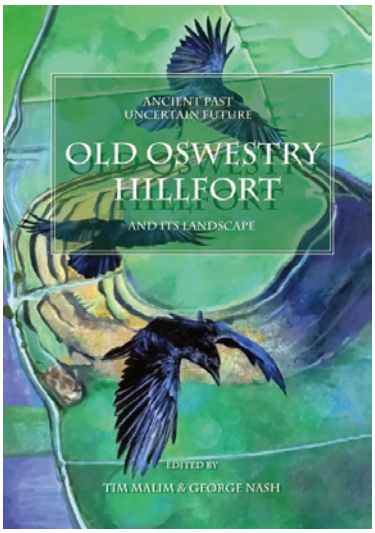
Until the 2020s, however, the only archaeological excavation of Old Oswestry was undertaken by Bill Varley and Brian St John O'Neil in 1939–40. Although geophysical prospection was undertaken within the interior by Arnold Aspinall in the 1970s, and the results of Varley's excavations were published by Gwilym Hughes in 1996, the only other field study was a detailed topographical and earthwork survey completed by a Royal Commission/English Heritage team led by Nicki Smith in 2010.

Aerial image of Old Oswestry viewed from the north (photo Alastair Reid 2014)



Left: Location map with surrounding hillforts (© Caroline Malim)

Below: Old Oswestry book cover (Archaeopress)



A threatened monument

In 2014 however, a stimulus to a fresh campaign of investigation was brought about by a threat that emerged from the Shropshire Local Plan to include residential housing that would occupy a large area around the south-eastern flank of the monument, greatly changing the existing rural and historic setting for the hillfort. This Society, many other archaeologists and thousands of local residents objected to the proposals, resulting in only one site being allocated (and recently, despite continued objections, this has been granted permission). Amongst local council proponents of the housing development one of the arguments put forward was that Old Oswestry could not be very important because there had been no investigations at the site since 1940. This ill-conceived argument provided a challenge, but also an opportunity to raise public involvement with the monument.

Following several seminars and 'hillfort hug' events which attracted hundreds of people to show their support for protecting the monument and its environs, a book was published, *Ancient Past Uncertain Future: Old Oswestry Hillfort and its Landscape*. This brought together research from several different contributors, examining the concept and design, historic context and cultural heritage of the hillfort and its landscape from prehistoric to contemporary times. Amongst many other aspects the book explores the variability in number and construction of the hillfort ramparts, its five-sided interior arrangement, inter-visibility with other hillforts and potential social relationships, hypothetical functions and symbolism, myth and folklore, ancient routeways and potential boundaries. The book also includes details of a large stone found near the western entrance with the head and torso of a horse created in bas relief.

New research

A community group was formed, Oswestry Heritage Gateway, to help with managing and promoting the hillfort and surrounding landscape, so that the socio-economic benefits of this iconic monument might be better appreciated by local policy makers and others. Volunteers assisted English Heritage in scrub management, in an endeavour to clear the western complex of cells, commonly described as 'ponds', of invasive vegetation. As part of this an auger survey was undertaken in 2018 through each 'pond' so the that the upper fills could be radiocarbon dated to see if they were relatively recent deposits that could be cleaned out. The uppermost 300–500 mm were found to have accumulated from the 17th century onwards, but more importantly lower deposits were detected in three of these 'ponds' that had organic-rich fills, separated from those above by mineral deposition. Unfortunately, due to covid, these cores are at Historic England's laboratory still awaiting analysis and

radiocarbon dating, but hopefully results will be forthcoming later this year. It is possible that the cores may contain palaeoenvironmental evidence dating back to the Iron Age.

Following this initial investigation, a campaign of non-intrusive survey and intrusive targeted excavation was planned, with small-scale grant funding provided by the Prehistoric Society, the Society of Antiquaries of London, and the Shropshire Archaeology and History Society. Photogrammetric UAV and magnetometer surveys were undertaken, the former covering the monument in its entirety, and the latter the interior only (see end links for 3D model and geophysical survey report). This confirmed and complemented existing aerial and LiDAR imagery which show many buried linear features within the plateau enclosed by the earthworks. The majority of these are from WW1 practice trenches and related features, which are also known from the fields east of the monument where the housing will be built. A large military camp at Park Hall used the hillfort and intervening fields for training purposes, including live fire exercises, and the consequent harm to buried remains within the interior is likely to have been significant. Nonetheless Varley's excavations in 1940 had discovered well-preserved roundhouses at two locations adjacent to the uppermost bank, and his trenches through the earthwork ramparts allowed him to suggest a phased sequence of events, a chronological model that can now be tested independently through the application of new techniques.

2021–2022 excavations

Two short seasons of excavation with a small team of volunteers were completed in September 2021 and 2022. The main aim of this work was to retrieve viable samples for scientific dating in three locations, and to assess the accuracy, and preservation after 80 years, of Varley's findings. The inner and outer banks were targeted, as these represented the beginning and end of the monument according to Varley's phasing. To minimise disturbance at the innermost (highest) rampart Trench 1 was aligned adjacent to the visible depression caused by Varley's backfilled Trench A, and an area was also opened behind the rampart (Trench 3), partially over Varley's trench extension where a roundhouse had been located. For the lower (outer) and considerably more massive bank, an erosion scar and desire path through the rampart was cut back (Trench 2) to obtain a full profile of the bank, and an auger was used in the ditch beneath to retrieve cores for sampling.

Due to the commitment and endurance of the volunteers, and some good weather, all the research aims were achieved. The lower bank was of glacis construction as described by Varley, *c*.4 m wide by 1.5 m high, with some tip lines evident but overall comprising a relatively homogenous mix of clays, gravels and cobblestones. At the rear heel of the bank two lines of stones were found which might represent a kerb or a slot for a palisade. The front of the bank fell steeply into the ditch below, which the auger survey showed was *c*.1.5 m deeper than its current level of fill, making the full height from base of ditch to top of bank 7.7 m over a horizontal distance of 10 m. Four samples for Optically Stimulated Luminescence (OSL) dating were taken from the bank profile, and a further seven from the ditch fill sequence.

The first 1.4 m of ditch infill had six OSL sequential age ranges, with age increasing the deeper the samples, suggesting the upper fill accumulation had occurred over the past *c*.300 years. The lowest sample at *c*.1.5–1.6 m depth had an age range that covered a wide period from Early–Late Bronze Age. The four OSL age ranges for the bank included wide variations from the beginning of the 5th millennium BC to the middle of the 1st millennium AD.

The results from Trench 1 through the upper bank confirmed much of Varley's record, with a *c*.3 m wide original rampart constructed with a heavily compacted small stone rubble and clay core, faced by stones on the outside, and with large stones forming the rear, presumably to hold the bank in position. A secondary phase of small stones and pebbles in a compact clay matrix was found overlying the original bank for a distance of *c*.4.5 m, but with a stony tail extending a further 2 m into the interior where a line of kerb stones marked the inside edge of the enlarged bank. Three OSL samples were taken through the bank material, but the resultant age range spans the Bronze and Iron Ages. Two daub samples from the bank makeup gave tighter OSL date ranges, however, with the sample from the original bank 708–148 BC, and the other (from the rear of the secondary bank material) 292 BC–AD 438. Two roundwood charcoal samples from this secondary bank were also radiocarbon dated, giving date ranges from the 4th–1st centuries BC.

Behind the bank a small area (Trench 3) was opened to locate Varley's roundhouse, and despite the surprisingly deep overburden containing bits of exploded munitions, a thin clay surface and several large postholes were found at about 0.5 m below the current ground surface. The postholes were up to 0.8 m in diameter and *c*.0.4 m in depth with large stones as part of the fill. Charcoal was retrieved from some of these features and from the clay (trample?) surface between the postholes. Oak was frequently represented accompanied by shrubby taxa of elder, hazel and plum-type wood along

Section through outer bank (Trench 2) with steep drop to ditch below, looking south-west (photo Tim Malim; scales in 0.5 m divisions)

Left: Section through inner bank (Trench 1), looking north (photo Tim Malim; scale in 0.2 m divisions). Right: Postholes in Trench 3 (photo Rob Speak; scales in 0.2m divisions)

with wet-loving woody species of purging buckthorn and poplar/ willow. The charred plant macrofossils predominantly consisted of cereal caryopses of wheat, and cereal chaff was present in the form of glume wheat spikelet forks and glume bases within the trampled surface. The weed seed assemblage and low frequencies of chaff, however, suggest that the cereal crop was relatively 'clean' when brought to the site, with most processing having been completed elsewhere. Four radiocarbon dates were obtained from seeds and a piece of roundwood, which suggest occupation of the roundhouse was during the late 4th to early 3rd centuries BC.

Copper-alloy artefacts in the English Heritage collection (photos Tim Malim; scale in cms)

In conclusion, the investigations have achieved their project aims, and Bayesian modelling of the dates will hopefully refine our understanding of some of the main events at the hillfort. The wide age ranges given by the OSL samples through the banks are disappointing but could easily be attributed to the nature of construction, with rapid digging and dumping of material providing an erratic opportunity for individual grains to be exposed to sunlight before being buried. What was more surprising was the good preservation found within the roundhouse, and the relatively rich palaeoenvironmental evidence and radiocarbon dates obtained from it. The depth of overburden suggests other Iron Age features could remain hidden from non-intrusive survey, and despite WW1 disturbance over parts of the monument, there is clear potential for continued survival of prehistoric remains in other parts. Full publication is planned in the next year, together with some artefact studies to reassess Varley's original ceramic assemblage, and also analysis of two rare, decorated bronze fittings within English Heritage's collection from the site. Any identification and possible parallels for these items would be much appreciated.

Acknowledgements

I am grateful to The Prehistoric Society; The Society of Antiquaries of London; Scottish Universities Environmental Research Centre (SUERC); the Research Laboratory for Archaeology and the History of Art, University of Oxford; and the Shropshire Archaeological and Historical Society Pagett Fund for grants and research assistance towards the investigations. Historic England and English Heritage have kindly given permission and support to the work, and many heartfelt thanks to all the individuals who have contributed time and expertise to make the research a success, and supported the campaign over the past decade.

Links

3D model of hillfort: https://skfb.ly/6XtxI

Geophysical survey report download: http://oldoswestryhillfort.co.uk/press-release/old-oswestry-geophysical-investigations-2021/

Tim Malim, Oswestry Heritage Gateway
(tim.malim01@gmail.com)

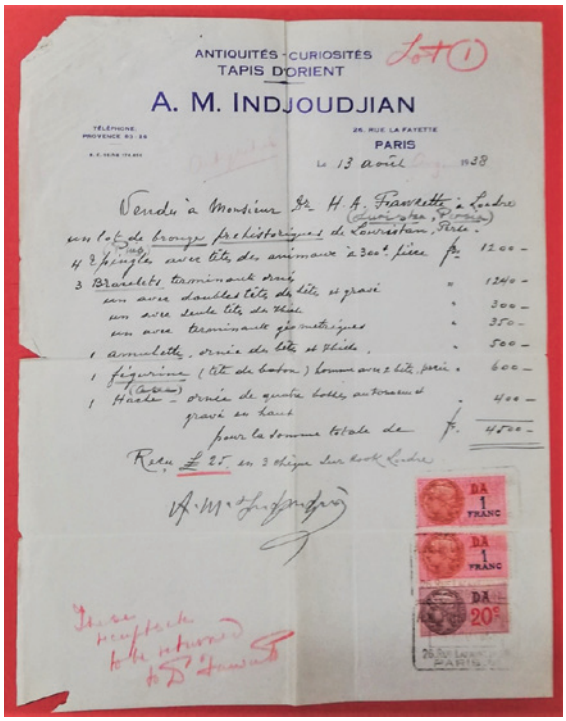
Putting the archaeology back into the antiquarian: an investigation of copper alloy objects from Luristan, Iran in the Dr H.A. Fawcett Collection of Typology

This study focusses on 89 copper alloy objects purporting to be from Luristan, held by Bristol Museum & Art Gallery in the 'Dr H.A. Fawcett Collection of Typology'. Dr Fawcett's collecting activity (*c.*1919–1970) was mainly conducted via the art markets, which obscured original object provenances and caused archaeological contexts to be lost. The study included an examination of the documentary archive that accompanies the collection and addressed questions about the specific origin and date of these objects, and whether or not they are genuine, by acquiring chemical composition data. The results were compared with the wider pre-existing data set of chemical analyses of Bronze Age and Iron Age copper alloys from Iran and its neighbouring regions.

Documentary archive

The Fawcett collection archive includes hundreds of receipts for items that he purchased. Data from the receipts has been made available to view online via Bristol City Council's Open Data platform. Images of all the objects are available to view via Bristol Museum's Collections Online. The receipts vary in form, from those written on commercial letter-headed note paper to auction-house sale receipts with clippings of relevant catalogue entries stuck to the reverse.

It proved challenging to match particular objects to specific purchases, especially where there were multiples of the same


ANTIQUITÉS - CURIOSITÉS
TAPIS DORIENT

A. M. INDJOUDJIAN

PARIS

Original receipt on letter-headed notepaper provided by A.M. Indjoudjian (Paris), dated 13 April 1938 for items purchased by Dr H.A. Fawcett.

FT 29 bridle bit. Openwork prehistoric objects including those similar to this example began to appear for sale in the 1920s. © Bristol Museum & Art Gallery.

object types, or no measurements had been noted. Fawcett also regularly sold material on to other dealers. Of the 89 objects only 17 could be identified as having been acquired from particular sources with any degree of certainty. The receipts suggest that Fawcett acquired Luristani material between 1937 and 1967 and that most of his purchases were acquired at auction via Sotheby's. Other vendors included, for example, A. M. Indjoudjian, G. F. Lawrence, P. D. Ward and other auction houses such as Glendinning and Co., Ltd. (London). Two items were purchased from 'Prof. R. A. Dara', who as yet has proven impossible to trace. None of the receipts provide information on archaeological provenance or previous collecting histories.

Scientific analysis and results

The chemical analysis of Iranian copper-alloy artefacts has been performed for nearly 100 years and there are now over 2000 published chemical analyses, produced by several different techniques of varying quality. Portable X-Ray Fluorescence (pXRF) equipment was used to rapidly evaluate Fawcett's collection of Iranian copper-alloy objects. By comparing the results with the legacy data set, we wanted to confirm that these objects are consistent with a Luristani origin as well as to understand choices made in their production, any systematic variation within the assemblage, any outliers, and to highlight what may be sampled for further investigation. Raw results were processed to provide a semi-quantitative reconstruction of the copper-alloy composition. These indicate themes within the assemblage, will guide further work, and allow us to engage with our archaeological aims.

Luristan is famous for its tin-bronze artefacts, which appear earlier and in greater numbers than neighbouring regions.

Table 1: Alloy composition of Luristani and other Iranian artefacts, from legacy data set.

Luristan					
Date	Copper	Bronze	Leaded Bronze	Gun-metal	Total no. of artefacts
3rd mill. BC	57.5	34.5	6.9	1.1	87
2nd mill. BC	5.7	81.4	11.4	1.4	70
1st mill. BC	2.9	86.8	9.8	0.5	205
Other Iran					
3rd mill. BC	77.6	19.3	2.9	0.3	379
2nd mill. BC	35.8	54.8	8.6	0.7	279
1st mill. BC	15.4	70.1	13.7	0.9	234

Table 1 summarises the legacy data setfrom the legacy data set. The Bristol dataset closely mirrors the wider pool of composition data for Luristan, with a high level of bronze and leaded bronze. Most object categories are of tin-bronze composition with occasional copper examples, or the rare addition of lead. On balance, more utilitarian objects such as arrowheads and axes show lower levels of tin, while bracelets contain very high levels, giving them a more silver appearance. Outliers such as dagger blade FT21, with over 30% tin, show indications of surface alteration. Overall, the wider pattern of Luristani metal indicates a secure source of tin, which could be selected by craftspeople to emphasise high value display objects such as bracelets and dagger blades. This may have been achieved by using high-tin trade metal, as in ring-ingots (FT71, FT73, FT91, and FT91) and adding varying amounts of copper until the desired mixture was achieved.

It is encouraging that the minor elements chemistry from the Bristol collection also match well with the legacy data set. Table 2 shows the dominance of arsenic (CS2) and arsenic-nickel (CS 11) copper compositions in both the new pXRF data and the wider legacy dataset. This underlines that the Bristol collection is likely to be Luristani and reinforces the pattern of Iranian copper metallurgy that has been built up over the last century of research. Dagger FT 21 may again be an outlier, with an arsenic-antimony-silver (CS 12) composition, which is unusual for Iranian prehistoric metal. This artefact also had a noticeable higher tin content indicating surface treatment.

Within these chemical patterns it is noticeable that the axes tend to have higher average levels of arsenic (2.5% As) than the pins (0.6%). Given the nature of pXRF this should not be overemphasised, but further invasive sampling should investigate what this indicates for production processes. The small pins may have lost a great deal of arsenic in their casting and working, compared to the larger axes with their lower relative surface area. The relative levels of arsenic have proved to be a useful tool in other Bronze Age case studies for understanding production techniques, though fully quantitative results are required.

Gail Boyle (gail.boyle@bristol.gov.uk), Senior Curator (Archaeology) at Bristol Museum & Art Gallery and Peter Bray, Research Fellow in Material Science, University of Reading

Links

Bristol Council's Open Data Platform: https://opendata.bristol.gov.uk/explore/dataset/dr-ha-fawcett-collection-of-typology/information/

Bristol Museum's Collections Online: https://museums.bristol.gov.uk/

Table 2: Minor element chemical patterns.

Bristol Luristan pXRF Case Study																	
	CS1	CS2	CS3	CS4	CS5	CS6	CS7	CS8	CS9	CS10	CS11	CS12	CS13	CS14	CS15	CS16	Total
	14.3	55.4	0.0	1.8	0.0	4.5	0.0	0.0	4.5	0.0	12.5	7.1	0.0	0.0	0.0	0.0	112
Luristan																	
	CS1	CS2	CS3	CS4	CS5	CS6	CS7	CS8	CS9	CS10	CS11	CS12	CS13	CS14	CS15	CS16	Total
3rd mill BC	0.7	12.9	0.0	1.4	1.4	5.8	0.0	0.0	12.2	0.7	26.6	2.2	0.0	7.9	22.3	5.8	138
2nd mill BC	9.5	37.9	0.0	1.1	3.2	7.4	0.0	3.2	3.2	1.1	20.0	2.1	0.0	2.1	8.4	1.1	95
1st mill BC	12.3	34.0	0.8	2.0	3.3	7.4	0.4	0.4	5.3	0.0	18.4	3.3	0.4	4.9	3.7	3.3	244
Other Iran																	
3rd mill BC	6.9	20.7	0.0	1.6	2.0	2.4	0.0	0.2	9.6	0.2	29.6	2.9	0.0	10.5	8.9	4.5	449
2nd mill BC	10.3	41.3	1.3	3.8	2.0	8.3	0.5	0.3	7.8	0.0	15.8	1.5	0.0	5.3	1.8	0.5	400
1st mill BC	15.5	25.4	6.6	1.7	4.4	4.4	0.0	0.0	5.0	0.0	29.8	3.3	0.0	1.7	1.1	1.1	181

Investigating the provenance of stone tools in Neolithic Serbia

This article presents the preliminary findings of an investigation conducted on the type and origin of raw materials used for stone tool production, focusing on the lithic assemblage from the Neolithic site of Drenovac located in the Middle Morava valley in Serbia. The current theory supports exploitation of the local resources; however, this has never been tested. This investigation, therefore, represents the first step towards elucidating the provenance of the raw materials exploited by the Neolithic community of Drenovac. Raw materials and excavated stone tools were

One of the Late Neolithic houses of Drenovac with the high level of preservation.

investigated through field reconnaissance and laboratory-based, geological techniques.

The Neolithic site of Drenovac is located in the middle Morava Valley of central Serbia. It is a deeply stratified site, with cultural deposits up to 6.5 m thick that span two main periods of occupation: the Early Neolithic associated with the Starčevo Culture (6100–5900 BC) and the Late Neolithic associated with Vinča Culture (5300–4700/4500 BC). The site was first recorded in 1966, while the first large-scale excavations were undertaken between 1968 and 1971. In 2004, the Archaeological Institute in Belgrade conducted further excavations to improve the understanding of the site's chronology, stratigraphy, formation processes and occupation dynamics.

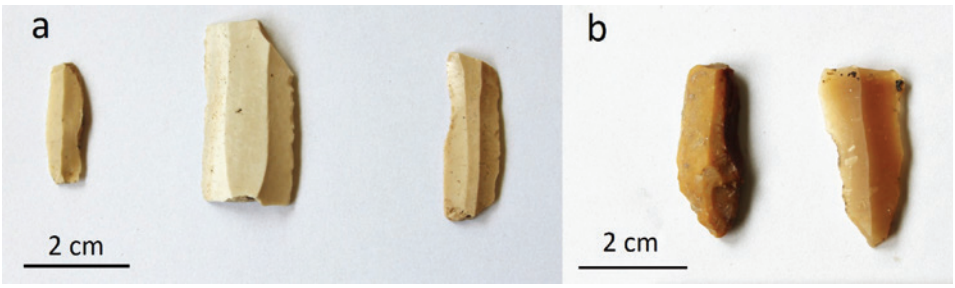
The Late Neolithic houses excavated at Drenovac rank amongst the best-preserved in Europe. In particular, the preservation of collapsed second-storey floors offers unique insights into the households and social organisation of this late Neolithic community.

The field trip to Serbia took place in September 2021, during which the lithic assemblage of the well-documented Neolithic site of Drenovac was examined and sub-sampled. Although various types of raw materials were used in the production of the lithics (e.g. metamorphic rocks), the majority of them were made of chert rocks. Therefore, it was decided to focus on the chert materials and try locating possible sources. The fieldwork did not detect any chert outcrop within the broader area around the site. Guided by the geological maps, two locations with chert outcrops were found in an area west of Jagodina town (approximately 50 km northwest of Drenovac) and samples were collected for further laboratory work.

Once back in the McBurney Laboratory in Cambridge, I was able to test the sampled lithics and raw materials with a full range of analytical techniques, including a) macroscopic description, b) microscopy and FTIR (Fourier Transform Infrared Spectroscopy) for the study of the mineralogical profile, and c) LA-ICP-MS (Laser Ablation-Inductively Coupled Plasma-Mass Spectrometry) for the study of the geochemical profile.

Briefly, the results revealed that the stone tools are made from different chert materials. The largest group within the assemblage featured a white-coloured exterior and smooth texture. Another important group was made of a yellowish-brown, shiny and translucent chert. Meanwhile, the macroscopic evaluation of the samples from the two Jagodina localities (i.e., colour, fabric, texture, lustre) suggests that both outcrops belong to the same source. Moreover, this work raised doubts that these source(s) could be related to any of the main groups of the assemblage. The mineralogical examination of all the samples (tool and raw materials) shows that they are dominated by quartz. Although such findings are expected for chert materials, they do not provide any extra information that will allow confirming or opposing a link between tools and sources. On the contrary, the findings from the geochemical analysis provide more solid conclusions. Starting from the chert outcrops, the results support a common origin, but the geochemical results are not strong enough to confirm a single source. Comparing these results with the tool samples, it is clear that they are not geochemically compatible, and it seems that the chert rocks found in the Jacodina area were not exploited for tool fabrication by the Neolithic community of Drenovac.

These are just preliminary results but have shown the potential of this research approach in pinpointing potential rock-sources for stone tools. Such investigation can contribute to identifying the prehistoric raw-material exploitation systems of this area and the wider pan-Balkan region.



Example of finds from the lithic assemblage of Drenovac that are indicative of the different chert materials exploited.
a) These white-coloured flakes are representative of the largest group and b) These brownish and shiny flakes are representative of another important group reported within the assemblage.

Acknowledgements
The fieldwork was carried out under the umbrella of the project 'Palaeo-landscape reconstruction of Neolithic Drenovac and its environs in the middle Morava valley' funded by the British Academy. I am hugely grateful to Professor Charles French for inviting me to participate in this project. Special thanks are due to all the members of the Institute of Archaeology in Belgrade and the Paraćin Regional Museum for their guidance and hospitality during our research trip. Finally, my special thanks to the Prehistoric Society that provided the necessary funds to conduct the very crucial elementary analysis for this type of investigation.

Petros Chatzimpaloglou (pc529@cam.ac.uk),
University of Cambridge

Peopling the Past: Reflecting on Prehistoric Europe – Europa Conference 2–4 June 2023

The 2023 Europa Conference was held at Jesus College, University of Cambridge, on a very warm and sunny weekend in early June. This year the conference was held to honour the achievements of Professor Marie Louise Stig Sørensen in the field of European prehistory, and who has been employed at the Department of Archaeology and Anthropology at Cambridge since 1987. The prize recognised her achievements researching the lives and deaths of Bronze Age communities in Scandinavia, Central Europe and Britain, and for her work on gender in prehistory and more generally in cultural heritage.

Marie Louise said, "I had not even thought about this as a possibility, so I was happily surprised. It means a lot when one's work is appreciated because being part of a discipline is about advancing insights – in my case how we comprehend how people lived in Europe some three to four thousand years ago. The prize is also very gratifying because my research interests have not always been very orthodox, so it shows that my contribution has mattered".

The conference itself comprised two full days of lectures, with speakers travelling from across Britain and Europe, to take part in the occasion. The first day saw early career researchers and more junior scholars present on themes

Prof Marie Louise Stig Sørensen is presented with the Europa prize by Society President Prof Linda Hurcombe. Photograph by Prof Katharina Rebay-Salisbury.

Marie Louise gives her keynote lecture. Photograph by Prof Katharina Rebay-Salisbury.

such as human-animal relations in the Bronze Age, trans-European metal networks, Bronze Age and Iron Age dress and accessories, mobility and identity. The second day included highly esteemed researchers who presented more synthetic overviews on topics where Marie Louise has made a great contribution to scholarship, including ancient genomics (Prof Eske Willerslev, Prof Philipp W. Stockhammer), the importance of 'ancestors' in 4th–3rd millennium BC (Prof John Robb), Bronze Age families, social inequality and gender (Prof Katharina Rebay-Salisbury, Prof Harry Fokkens) and the exchange, temporalities and meaning of artefacts (Prof Jo Sofaer, Prof Helle Vandkilde and colleagues, Dr Magdolna Vicze)

Marie Louise's keynote lecture on 'A mess of inferences, insights and data: on the engendering of European Prehistory' was extremely well received. There were also 13 research posters displayed at the conference, covering a wide range of topics including prehistoric pottery, monuments, rock art, artefacts and corded skirt wearers of the Danish Bronze Age. The weekend concluded with a visit to the Museum of Archaeology and Anthropology in Cambridge for a private tour led by Senior Curator Dr Jody Joy and an excursion nearby Wandlebury hillfort, led by Cambridge archaeologist Chris Evans.

The Prehistoric Society would like to thank all the organisers, speakers, poster contributors, tour guides and attendees for making this such a successful conference.

MEETINGS PROGRAMME 2023–2024

DATE	VENUE/FORMAT	DETAILS
2023		
Friday 13 October 7.30pm (BST)	**Lecture** The United Reformed Church Hall, Church Road, Welwyn Garden City, AL8 6PR	***The Neanderthal people of La Mancheland: a deep time record of a lost cross-channel landscape*** by Dr Matt Pope, UCL Annual joint lecture with Welwyn Archaeological Society
Wednesday 18 October 5.00pm (BST)	**Lecture** Blended (in-person/online) Society of Antiquaries, Burlington House, London	***Mortuary practices in the Iron Age of southwest Britain***, by Dr Adelle Bricking, National Museum Wales 23rd Sara Champion memorial lecture
Tuesday 31 October 7.00pm (GMT)	**Lecture** Talbot Campus, Bournemouth University	***The science of early farming in Europe***, by Prof Amy Bogaard, University of Oxford 7th Pitt Rivers lecture
Saturday 4 November 2.15pm (GMT)	**Lecture** Blended (in-person/online) Norwich Castle Museum, Castle Meadow, Norwich	***Hillforts of Britain and Ireland – an overview of a monument type from the nineteenth to the twenty-first centuries***, by Prof Gary Lock, University of Oxford, and Prof Ian Ralston, University of Edinburgh Annual joint lecture with Norwich and Norfolk Archaeological Society
Thursday 14 December (time tbc)	**Lecture** Leicester University Venue TBC	***A tale of three chariots***, by Paula Ware, MAP Archaeological Practice Ltd Annual joint lecture with Leicestershire Fieldworkers
2024		
Monday 5 February 6.00pm (GMT)	**Lecture** In person Law Faculty on the Sidgwick Site, University of Cambridge	***'Rewilding' later prehistory: archaeological wildlife and its role in contemporary nature recovery***, by Dr Anwen Cooper, Oxford Archaeology Annual joint lecture with Cambridge Antiquarian Society
Thursday 8 February 6.00pm (GMT)	**Lecture** Blended (in-person/ online) Augustine United Church of George IV Bridge, Edinburgh	***Mesolithic catastrophe: the impact of the Storegga Slide tsunami on the Mesolithic population of Britain***, by Prof Clive Waddington Biannual Joint Lecture with the Society of Antiquaries of Scotland
Tuesday 30 February 12.00pm (GMT)	**Lecture** Online (Zoom)	***Tracing culinary traditions in prehistoric East and Central Asia***, by Dr Shinya Shoda, University of York Global Pasts Lecture
Tuesday 6 February 7.00pm (GMT)	**Lecture** Online (Zoom)	***The emergence of agricultural societies in mainland southeast Asia 5000–3500 cal BP***, by Prof Philip Piper, Australian National University Global Pasts Lecture
Thursday 15 February 7.00pm (GMT)	**Lecture** Online (Zoom)	***Speaker & Title TBC*** Annual Joint Lecture with Cornwall Archaeological Society
Wednesday 6 March 7.30pm (GMT)	**Lecture** Blended (in person/online) Venue TBC	***The impact of prehistoric agriculture on the climate of Europe***, by Professor Ralph Fyfe, Plymouth University Annual Joint Lecture with Devon Archaeological Society
Tuesday 14 May 6.30pm (BST)	**Lecture** Online (Zoom)	***Palaeo-London: thinking about the Ice Age archaeology and environments of the capital***, by Dr Matt Pope, UCL Annual Joint Lecture with LAMAS

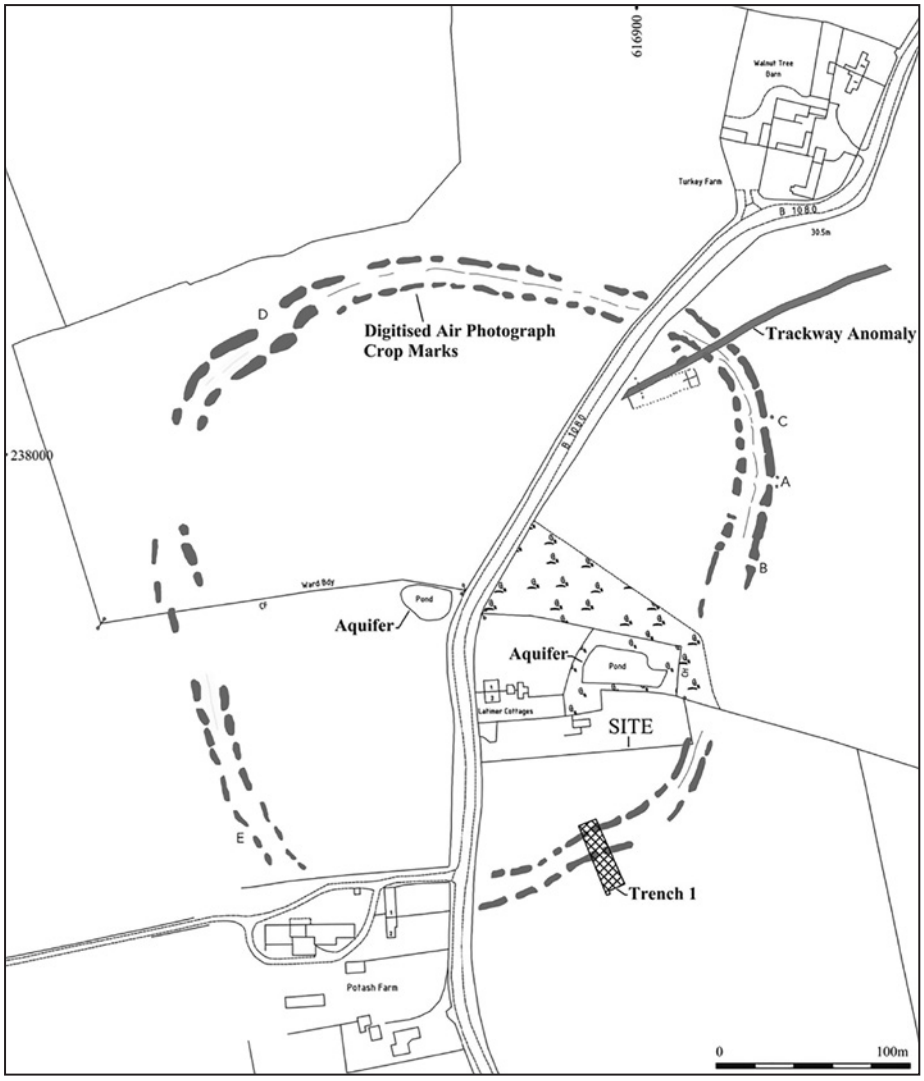
We continue to work on our programme with more lectures to be announced later in the year. Meetings may be liable to change. Further details, including how to join virtual meetings, will be available online: http://www.prehistoricsociety.org/events/

Gathering Itineraries: Reconstructing the Practices of Deposition at an Early Neolithic Causewayed Enclosure in Eastern Britain

During a hot, dry summer in 1969 aerial photography identified crop marks spread across agricultural fields on the Shotley Peninsula, Suffolk. These marks – two concentric circuits of ditches enclosing *c*.8.55 ha – were believed to represent an Early Neolithic causewayed enclosure, a type of earthen monument constructed for gatherings of small, dispersed communities during the 4th millennium cal BC. In 2018, the Freston Archaeological Research Mission (FARM; www.socialsciences.mcmaster.ca/freston-archaeological-research-mission-farm) was initiated to detail the monument's character, and to recover suitable organic materials to construct an absolute chronology of the enclosure's history, from construction to abandonment.

My thesis research deals with the depositional histories of the material culture at Freston to understand the kinds of social practices performed at the monument. Specifically, I am interested in the character of the ceramic assemblage, the role that pots played in the various activities at the site, and in distinguishing between cases of deliberate placement of vessels versus the dumping of broken and worn vessels in the aftermath of gatherings. In doing so, I am attempting to reconstruct prehistoric practices at Freston and understand the objects' 'itineraries' from their cultural realm of production, use, discard, and deposition, via the natural taphonomic processes that also shaped the archaeological deposits.

Differences in sherd size and freshness can help to discriminate between vessels that were deliberately taken out of circulation to be deposited in the ditches, and those long-broken pots whose remains were gathered from middens inside the enclosure and/or washed in. For example, we have a small assemblage of fresh sherds placed at the base of an outer ditch terminus (F#004), that appears to have been deposited with quantities of wood and plant materials, all of which were then burnt, conceivably as a practice related to the foundation of this feature, after which the ditch seems to have silted up naturally. In stark contrast, data from one of the inner ditches (F#002) provides evidence for three distinct periods of activity. The ditch was first dug, which



Site plan of the Freston causewayed enclosure as depicted through aerial photographs (developed by N. Jackson from Dyer 1995; Martin 2007).

Sherds of Mildenhall Ware from the Freston causewayed enclosure, showing various sizes and conditions of these fragmented vessels (photo by R. Moir).

produced a few sherds of small, worn pottery; the recutting of the ditch in the next period of activity would have removed some of the objects previously deposited, with this material likely thrown onto the adjacent bank. Many freshly broken sherds were then deposited into the ditch, along with 'special' deposits of artefact clusters on either side. After this large accumulation of material, the ditch was abandoned and silted up naturally, similar to what we see in F#004. But there were still small, worn sherds that made their way into the ditch in the upper abandonment phase. However, rather than being deposited, it is more likely that these sherds were from the earlier phases of the site's use, likely the first deposits that were removed when the ditch was recut and material tossed onto the banks, as well as surface material that was naturally washed into the ditch. Here we can start to get a sense of the tempo of activity at the site, and the way that the archaeological deposits were formed.

The way that pots were treated after they were taken out of circulation can provide us with clues about people's activities, and potentially their social organisation in the past. For example, the variability in Early Neolithic depositional practices has been noted at a regional scale, with these differences argued to reflect how social reproduction was organized within groups. The deposition of freshly fragmented pots at Freston seems to have been focused on the inner ditches, with multiple events that marked periods of occupation and abandonment at the site. However, between these events, the fragmentation and characteristics of the pottery were similar. For example, within the primary deposits of the inner ditch termini (F#001 and F#002), the sherds reflect similar kinds of pots: both plain and decorated vessels with mostly coarse to very coarse fabrics and wall thicknesses between 4–12 mm. However, the fragmentation of vessels varied: sherds in F#001 typically have a maximum length of *c*.20–100 mm and weigh between 0.5–150 g, while vessels in F#002 have a maximum length of 15–65 mm and weigh between 2–40g. Thus, within adjacent ditches we can begin to see differences in the way pots were treated, with greater fragmentation occurring in F#002 than in F#001.

Following Pierre Bourdieu's notion that in the absence of fixed institutions, the maintenance of social reproduction depends on repetitive practices, John Chapman in his 2000 book *Fragmentation in Archaeology* suggested that in the Neolithic, semi-sedentary communities likely relied upon repeated actions involving the fragmentation and structured deposition of pots. These repeated actions worked as processes of social integration of group members by objectifying commonly accepted traditions, but also as processes of dissolution, which symbolized moments of social rupture. At Freston, periods of waterlogging and soil formation between the depositional events within the ditches suggests that there were gaps in time between visits to the site (or at least to that part of the site so far investigated). This may have been deliberate, with people choosing not to gather until a socially acceptable time permitted (or required) the use of the causewayed enclosure for social negotiations. As one of the largest causewayed enclosures in Britain (at 8.55 ha), Freston certainly had a complex history, likely with many episodes of both social integration and rupture. The archaeological deposits can begin to form a picture of these moments in time, and while we may never fully understand the logic of these events, the objects left behind can inform us about the social practices that underpinned the reasoning for why causewayed enclosures were important places during the Early Neolithic.

Rose Moir (moirre@mcmaster.ca),
McMaster University, Ontario

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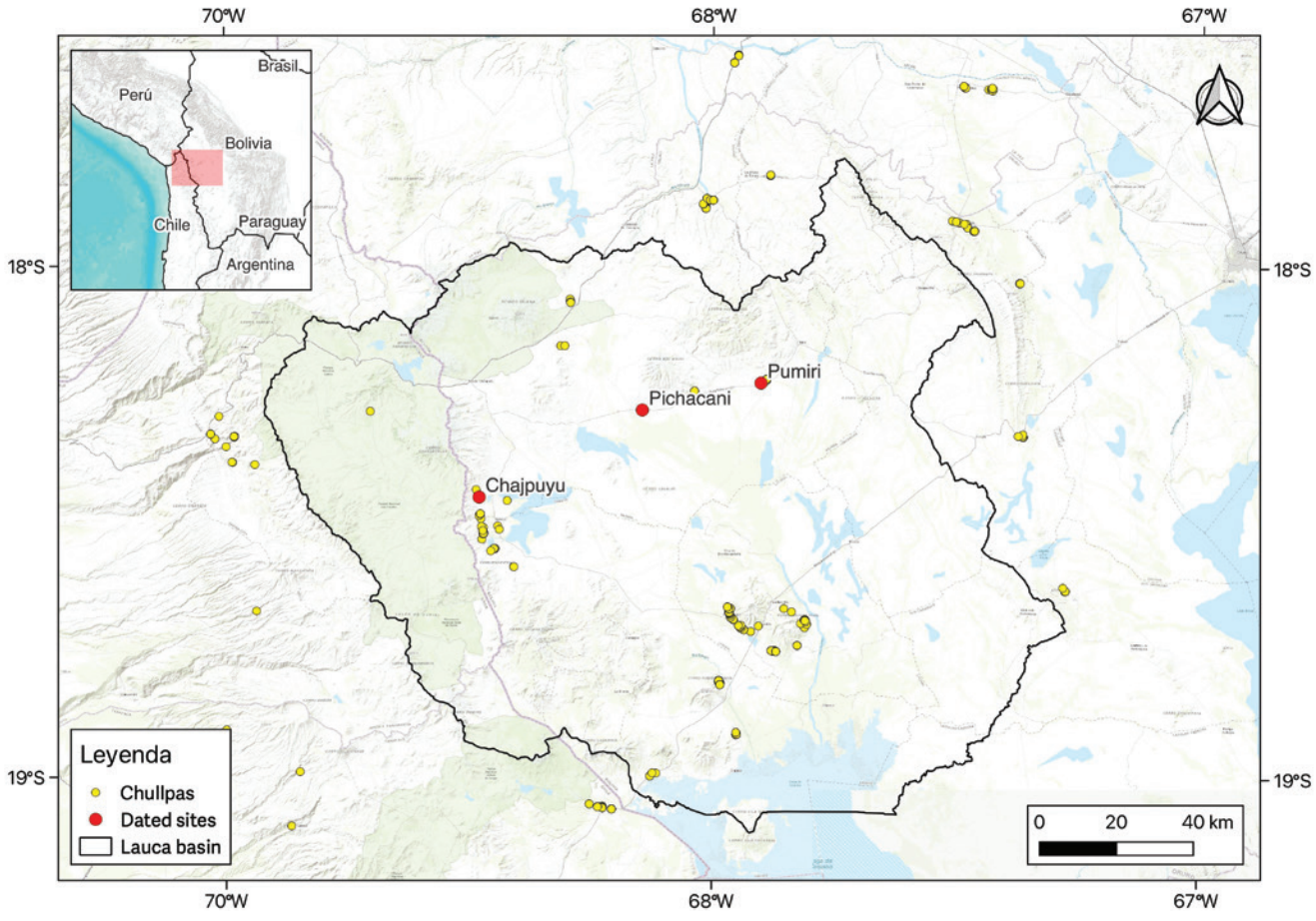
Radiocarbon dating applied to the architectural and spatial variability of *chullpas* (above-ground tower-shaped monuments) in Altiplano Carangas (Oruro, Bolivia)

During the so-called Regional Development Period (900–1450 CE), the Carangas region of the Bolivian Altiplano was densely occupied. By the time of the *Inka* Conquest, a large ethnic chiefdom, called the Carangas, had emerged and appears to have been involved in large scale interregional exchanges and distinctive rituals. In common with other areas of the Andes, the Carangas region is dotted with a large number of above-ground tower-shaped monuments called *chullpas*. Although multiple functional interpretations exist, these structures are most often thought to be burial places for local leaders who adapted the broader mortuary tradition, constructing their *chullpas* along major travel routes. It is unknown whether the Carangas were an ethnic group but these *chullpas* are considered an essential feature in the emerging identity and social hierarchy within this community. However, there is little scientific dating of any Regional Development Period sites, so any enhanced chronology for *chullpa* construction and maintenance will offer a significant addition both to our understanding of the region's prehistory and to this enigmatic monument type.

Recent research has demonstrated that road corridor Pumiri–Pichacani–Chajpuyu, located in the core of Carangas Altiplano was densely occupied by both Carangas and subsequent *Inka* Empire communities. Along this corridor, many types of settlements associated with both communities have been found, such as a) walled hilltops called *pukaras*, places where community rituals were carried out; b) *Inka* settlements where administrative activities took place; and c) complex agrohydraulic systems where crops were grown.

A systematic survey carried out in the frame of the project 'Andean Networks: Archaeogeography of Andean Road palimpsest' (https://redesandinas.hypotheses.org/) has located more than ten *chullpa*-sites in this road corridor. Within these sites, more than 40 *chullpa*-buildings have been preliminary identified, highlighting different architectural attributes, constructive styles, and locations that might be relate to sub-groups within the Carangas chiefdom.

Our initial survey has recorded the topography and architectural features (using photogrammetry) of 40 *chullpa*-buildings within three *chullpa*-sites: a) Chajpuyu, a site directly associated with *Inka* administrative occupation; b) Pichacani, a more 'pure' Regional Development Period walled



Sample locations within Carangas Altiplano.

a) Jaraba ichu sample location; b) Jaraba ichu associated with chullpa-building; c) Jaraba ichu used to prepare adobe walls; d) Jaraba ichu sample collection.

hilltop *pukara;* and c) Pumiri, *chullpas* spread alongside roads with no direct built environment associated contexts. A wide variability of adobe constructive styles has been found among these three sites including *chullpas* built in plain-adobe, painted-adobe, and a mix of adobe-stone.

The process of building the adobe's *chullpas* involved the combination of soil, gravel, and ichu (feathergrass) or pajonal (scrubland) shrubs. Peruvian feathergrass, *Jaraba ichu sp.*, is an endemic vegetation which appears 3,400 m above sea level in the Andes Altiplano. *Jaraba ichu* starts losing its organic properties when it is cut from its original bush to be used in the adobe's preparation process, which is crucial for making the adobe more resistant. Fourteen *Jaraba ichu* adobe samples were collected from seven *chullpa*-buildings located within these three sites. These samples come from secure contexts because they have a short-lived growth, not old wood, and are directly connected with the human activity needed for making adobe. All the samples were extracted from the buildings' walls, the first half (n=7) was collected from the wall's outer layer, while the second half (n=7) was collected from the inner layer, exposed once the outer was removed. In this research, a selection of three inner layer samples were chosen, to be dated at the SUERC radiocarbon laboratory.

The expected date of the samples was between 900–1,400 CE, because this is the period when *chullpas* appeared and spread in other areas of the Altiplano during the Regional Development Period. However, the results obtained thanks to the Radiocarbon Award from the Prehistoric Society show that the shrubs used to prepare the adobe dated from the 15th to the 17th centuries, a time when different, sudden and unexpected migration waves of *Inkas* and Spaniards arrived in this region. Economic, social, political, and cosmological changes were deeply introduced in Carangas communities by the *Inka* Empire and later by the Spanish, which is seen in the architectural variability of the dated *chullpas*.

The date estimate for the construction of Pichacani *chullpa* corresponds to the end of the Regional Development Period (900–1,450 CE) which fits with the current model for the emergence of the Carangas proposed for this period and synchronic to the emergence of other ethnic groups in the Altiplano, such as the Pacajes in Caquiavi (La Paz, Bolivia).

Chajpuyu *chullpa* has a date associated with the *Inka* Period (1,450–1,520 CE) suggesting these buildings were constructed during the period of *Inka* occupation. This is an important contribution because the *Inka* Conquest may have incentivised the construction of *chullpas*. This is known to have happened elsewhere, for example in the Titicaca Basin – where the Lupacas built *chullpa* buildings using *Inka* building traditions such as the so-called angled stone style, which is present in Chajpuyu as well.

Pumiri *chullpa* dates to within the Spanish Crown Colonial Period showing that the buildings continued in construction until the late colonial occupation, near the 17th century. These findings are crucial to comprehend the role that *chullpas* played for Carangas communities as a dynamic process, after the Spanish Crown Policies of Extirpation of Idolatries were institutionalized by Viceroy Toledo in the Lima Concilium (1551–1552) introducing deep changes in local communities across the Andes.

The radiocarbon dates obtained in this research are a starting point to understanding the *chullpa* phenomenon as part of a dynamic process, more complex at local levels than expected. This study of *chullpas*' distribution and chronology

Site	Ground shape	Chambers	Spatial associations	Constructive materials	Radiocarbon determination	Calibrated date (95%)
Pichacani AguaRica	Rectangular	Double	Paired	Adobe	514±24 BP	1400–1440 cal CE
Chajpuyu	Rectangular	Single	Alignment	Painted adobe	397±22 BP	1450–1620 cal CE
Pumiri	Rectangular	Single	Paired	Adobe and stone	234±22 BP	1640–1800 cal CE

Summary table of sampled chullpas.

is proposed to be the beginning of further research to contribute to a better understanding of how Carangas societies emerged, spread, and interacted within the road network system under study and how they cohabited with *Inka* and Spanish populations through time. One direct output of these chronological results is the support for any further spatial and computational analyses to comprehend how *chullpas* related to their immediate surroundings, including built environment and landscapes, due to their ideological role within the Andean cosmological pantheon. Finally, any further radiocarbon dates would strongly contribute to seeing if, at intra-site levels, all these changes were simultaneous or if they also evolved differently over time, offering a significant addition to our understanding of the region's prehistory and to the proper archaeology of this monument type.

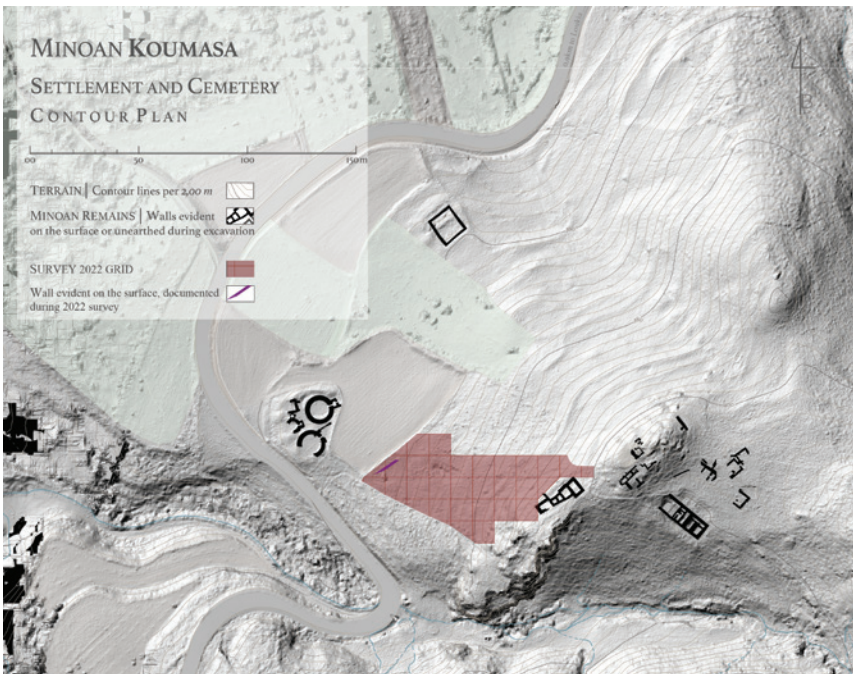
Cristian Gonzalez Rodriguez, UCL Institute of Archaeology, London (c.gonzalez-rodriguez@ucl.ac.uk), Bill Sillar, UCL Institute of Archaeology, and Thibault Saintenoy, Incipit-CSIC, Santiago de Compostela, Spain

Minoan Koumasa – Investigation of the West Slope of Korakiés Hill

Koumasa has been known since the early 20th century as the place of an important Bronze Age cemetery and settlement, which together span the entire sequence of Crete's Minoan civilization from the middle of the 4th millennium to around 1200 BC. The archaeological site is located between the modern villages of Loukia and Koumasa in south central Crete, on one of the northern foothills of the Asterousia Mountains known as Korakiés, from where it is overlooking the Mesara plain. Koumasa has become most famous for its Early Minoan to early Middle Minoan tholos tombs and burial buildings, excavated first by Greek archaeologist Stephanos Xanthoudides in the years 1904 to 1906, with plenty of finds including clay and stone vases, Cretan and Cycladic figurines, weapons, jewellery, and seals. Since 2012, both the cemetery and the settlement have been re-investigated and further explored by the University of Heidelberg, under the auspices of the Archaeological Society at Athens and in cooperation with the Ephorate of Antiquities of Heraklion.

In summer 2022, a new sub-project was launched to study the occupation of the west slope of Korakiés hill. At the foot of the hill is the Early to Middle Minoan cemetery and on the plateau-like top is a Middle to early Late Minoan settlement, including a 'sanctuary', which existed until the latest Late Minoan period. Covering an area of 105 m east–west by 40 m north–south, work in the field focused on the documentation of finds and features on the surface, from the smoothly ascending bottom section of the slope near the cemetery eastwards towards the steep uppermost section, where an elongated building of early Late Minoan date had previously been excavated, just below the top ridge of the hill. The work was carried out in units based on the 10x10 m site grid and included the thorough description of the surface situation, the collection of surface pottery and objects, and, where feasible, the clearing of vegetation and loose, small to medium-sized stones. All pottery was washed, weighed, and counted, as well as preliminarily analysed, before being taken into storage at the Archaeological Museum of the Mesara at the end of the campaign for future study.

Work commenced in the lowermost section of the surveyed area, where removal of stones and collection of surface



Left: General plan of the archaeological site of Minoan Koumasa, including the grid of the 2022 survey (plan © Koumasa Landscape Project).

Below: View eastwards up the west slope of Korakiés hill, with remains of wall visible in the bottom left corner (photograph courtesy of Andreas Neumann).

material had already been carried out in 2017 in preparation for a geophysical prospection. The amount of stones, pottery, and stone tools that have since re-accumulated on the surface by soil erosion and sheep pasture suggests a remarkable density of subsurface material in this area. A wall of about 1.2 m width traced on the surface over a length of 11.8 m is now the structure closest to the cemetery, although its exact function and date cannot be determined without excavation.

As work progressed further up the hill, considerable quantities of surface pottery and stone tools continued to be collected. Minoan pottery, among them many fragments of coarse utilitarian pottery including tripod cooking pots and pithoi, as well as fragments of conical cups were found scattered across the entire slope. But there were also fragments of Roman pantiles found concentrated with fragments of terra sigillata in the southwestern section of the area, suggesting the existence of Roman tombs or roofed structures, perhaps more of the Roman graves covered by terracotta tiles that were already discovered by Xanthoudides in the area of the nearby cemetery.

Further uphill, at the point where an impressive outcrop rises steeply above the western slope from the more gently slanting surface below, a dense accumulation of wall debris was found, probably from structures built against the vertically rising rock. The surface cleaning here brought to light a stone object, which possesses its closest parallels in objects that were found in one of the early tholos tombs and identified as dagger pommels by Xanthoudides. Its discovery in the context of wall debris and later, mainly Late Minoan, pottery sparks wonder about the circumstances of how this early pommel ended up here.

All in all, the superficial exploration of the west slope of Korakiés hill as well as the preliminary assessment of the finds suggest occupation of a substantial area of the slope in Minoan, notably in Late Minoan, times as well as selective use in Roman times. Future excavation will shed light on the nature of the occupation between the known settlement and the cemetery in the Bronze Age, and on interactions with these structures in the subsequent periods.

Acknowledgments
I am grateful to the Prehistoric Society for supporting the work described here, and to the Institute for Aegean Prehistory (INSTAP) for funding the ongoing research at Minoan Koumasa.

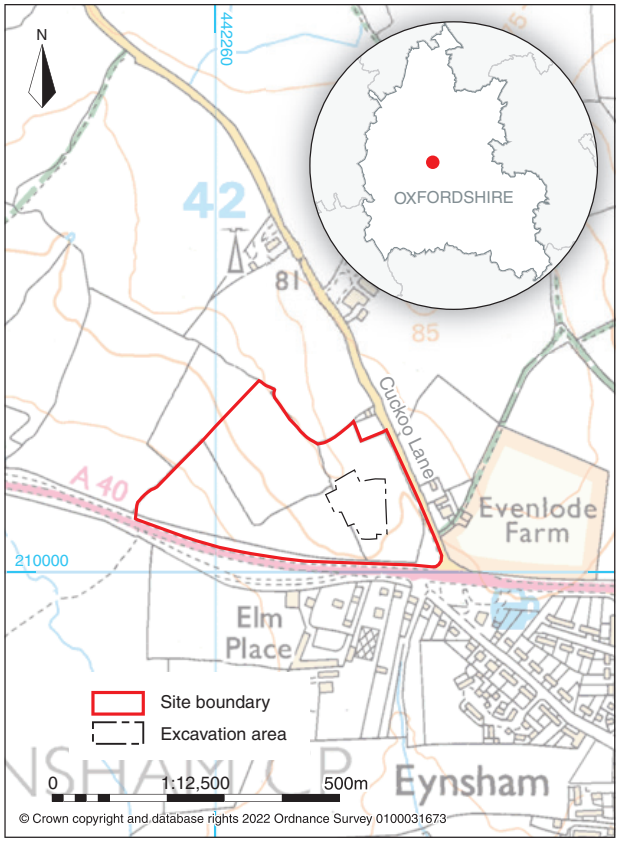
Ute Guenkel-Maschek (uteguenkel@gmx.net), University of Heidelberg, Germany

A possible golden eagle bone pin from an Early Bronze Age cremation burial found at Eynsham, Oxfordshire

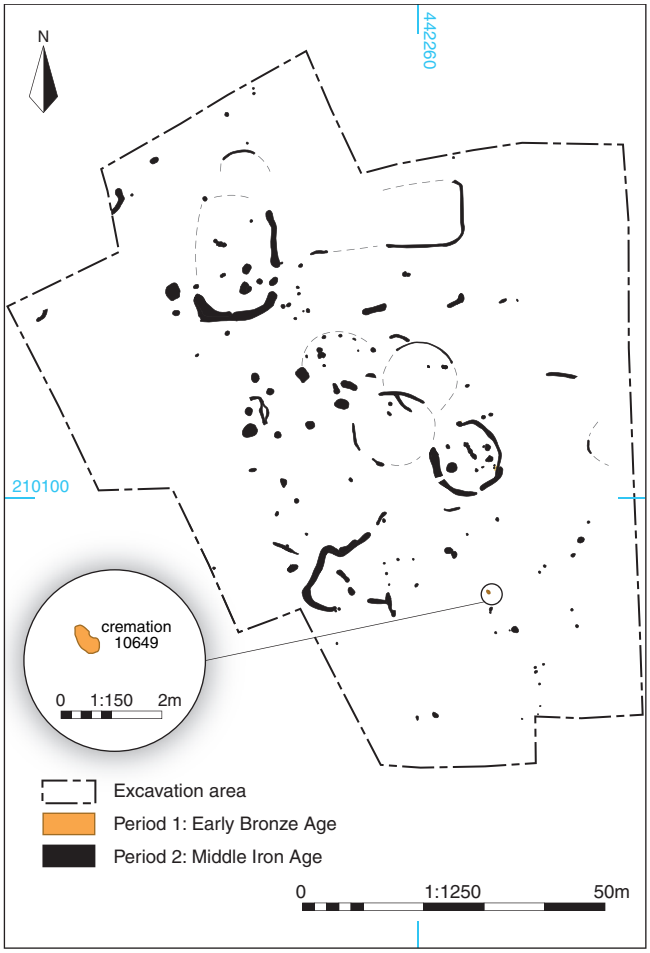
Excavation of a Middle Iron Age settlement at Eynsham, Oxfordshire, by Cotswold Archaeology in 2022, has led to the exciting discovery of a pin manufactured from what appears to be the bone of a golden eagle in an Early Bronze Age cremation burial. The burial, of a child, initially appeared to be isolated, but lay within a much wider Neolithic and Bronze Age monumental and funerary landscape around Eynsham.

The cremation burial was dated by radiocarbon analysis, which provided a date range of 1880–1690 cal BC (95% probability, SUERC-108039, 3465±24). The cremated remains of the child had been placed, unurned, in a shallow pit. No evidence for a mound or enclosing ditch were identified and it probably represents a flat grave. The cremated bone was low in weight (68.3 g) and skull and lower limb bones were the only identifiable elements. It is possible that the burial represented a token deposit, a feature of prehistoric cremation burials where the internment of the entire body appears not to have been necessary. It has been suggested that the treatment of the body after death could have taken many forms, with deposition of part of the body being just one aspect of prehistoric post-mortem social practices.

A fragment of worked bird bone was found amongst the child's remains and has been identified as a probable pin. It was calcined, indicating that it had been on the pyre with the individual and probably represents a personal object,



Site location (1:12,500).



Plan showing the location of the Early Bronze Age cremation burial (1:1250)

perhaps used for fastening clothing or styling hair. The pin had also been pierced at one end and may have been worn by the individual, perhaps as an amulet. Bone objects such as pins and points are common items found in prehistoric burials across Britain, but the particular significance of this object was that it had been shaped from the toe bone (first phalanx) of an eagle-sized bird. This was subsequently identified as possible golden eagle (*Aquila chrysaetos*), through the bird reference collection held at the Natural History Museum at Tring, Hertfordshire.

The golden eagle is the second largest native bird in the UK, the white-tailed eagle being the largest. Golden eagles prefer upland habitats and although they are mostly found in Scotland today, they were once more widespread. Despite this, records of golden eagle bones on archaeological sites are rare, implying that they held some form of special significance that possibly restricted hunting of them. Currently, the bone pin from the A40 Eynsham site is the only Bronze Age example known in England and one of only a few from prehistoric sites in England, including an example from an Iron Age settlement at Meare Lake Village, Somerset and a Neolithic example from

The eagle bone pin of possible golden eagle

Fox Hole Cave on High Wheeldon Hill in the Peak District. One other similar Bronze Age example has been identified in Scotland, comprising three phalanges of golden eagle in a cremation burial of a child from an Early Bronze Age cemetery in Skilmafilly, near Maud in Aberdeenshire.

Eagles have acquired a range of symbolic associations in Europe and beyond from at the least the Roman period, when they were regarded as a symbol of strength, wisdom, courage and immortality. It is possible that a similar situation existed in later prehistory. Of the ten eagle bones (both golden and white-tailed) recorded from Neolithic and Bronze Age sites across Britain, half were associated with tombs in Orkney and one was from Coneybury Henge, Wiltshire, suggesting that during prehistory eagles were preserved for certain ceremonies. A similar pattern was also identified in a study of the Bronze Age in northern Europe, where eagle bones were most commonly associated with human burials. Eagle feet are the part of the bird most often found on Bronze Age sites in Britain and it is possible such an object could have been considered talismanic.

Eagle bones from Bronze Age sites in Northern Europe were often found in cremation burials of children and it has been suggested that they were selected as they embodied the affection and naturing instincts of eagles towards their young. It is feasible that the inclusion of the eagle bone pin with the child burial at the A40, Eynsham site was linked with afterlife beliefs, raising further questions about its use as a pyre good for a child.

Jo Barker (joanne.barker@cotswoldarchaeology.co.uk) Cotswold Archaeology, Milton Keynes and Matilda Holmes (matty@archaeozoology.co.uk), freelance animal bone specialist

The deadline for submissions for PAST 106 is 2nd February 2024. Contributions to Editor, Susan Greaney, University of Exeter, Laver Building, North Park Road, Exeter, EX4 4QE. E-mail: past@prehistoricsociety.org. Contributions as e-mail attachments are preferred (either .docx or .rtf files) with illustrations sent as .jpeg, .tif or .pdf files. The book reviews editor is Helen Chittock, MoLA (Museum of London Archaeology), Mortimer Wheeler House, 46 Eagle Wharf Road, London, N1 7ED. E-mail: reviews@prehistoricsociety.org. Queries over subscriptions and membership should go to the Society administrator at the London address on the front cover. E-mail: admin@prehistoricsociety.org.