Gold in Britain’s auriferous regions, 2450–800BC

Incorruptible and brilliant, and shining like the sun, gold has always attracted attention. From its earliest known use at Varna around 4500 BC, this metal has been utilised to make some of the finest objects humans have ever possessed. Gold use, and the know-how to work it, arrived in Britain with the ‘Beaker people’ in the 25th century BC: a pair of basket-shaped hair ornaments and a ‘cushion stone’ for working gold were buried with the Amesbury Archer. Over the course of the Chalcolithic and Bronze Age, goldworking evolved from the plain and embossed sheet gold tradition, to one that featured heavy bar torcs, and then to traditions whose techniques included soldering and diffusion-bonding.

There has been a long history of research on, and analysis of, Britain’s prehistoric gold objects, with the late Joan Taylor having made a major contribution, especially to the study of Early Bronze Age lunulae. Most recently, lead isotope analysis by Chris Standish has overturned ideas about the source of the gold used in Early Bronze Age Ireland and Britain, underlining the importance of Cornwall as a source area. His recent analysis of gold pins from the hilt of the Bush Barrow dagger has revealed that Cornwall is the most likely source. And analysis by Professor Gregor Borg of the University of Halle, using LA-ICP-MS and other techniques, has concluded that Cornish gold (as well as Cornish tin) had also been used to make elements of the Nebra Sky Disc.

But the more we find out, the more we realise there is still to discover. For example, many of Britain’s iconic prehistoric gold objects, including the ‘cape’ from Mold in north-east Wales and the cup from Rillaton in Cornwall, have been found in Britain’s auriferous (gold-bearing) regions – but were they made from local gold?

With the aim of taking stock of what we know about Britain’s early gold artefacts, what we need to find out, and how to
find that out, Alison Sheridan (National Museums Scotland) and Jana Horak (Amgueddfa Cymru – National Museums Wales) successfully bid for an AHRC Network Grant to set up a project called ‘Gold in Britain’s auriferous regions, 2450–800BC: towards a coherent research framework and strategy’. It was funded from May 2018 to October 2019, but its work continues and plans are afoot to seek funding for a major international study to implement the strategy. The project created an international, inter-disciplinary research network that brought together archaeologists, archaeometallurgists, geologists, prospectors and practising goldworkers to share their expertise and pass skills to a new generation of early career researchers. Members of the network met in three workshops, held in Edinburgh, Cardiff and Dublin, to create a research framework and research strategy, and the resulting documents will shortly be published online in open access format.

The gold-bearing regions of Britain (i.e. Scotland, Wales, north-west and south-west England) were chosen as the focus to explore questions about where, when and how gold was extracted; the nature and scale of the gold supply at different points between c. 2450 BC and 800 BC; how gold was worked and how know-how was controlled and passed on; how gold was used, circulated and deposited; and what its significance and value to its users were. While focusing on Britain’s auriferous regions, the research network also sought to understand the gold objects found in these areas within the broader, international picture of Chalcolithic and Bronze Age gold use. Among the topics that were discussed intensively were the complexities of sourcing gold objects: an artefact’s composition can be affected by deliberate alloying, by recycling and by mixing gold from different sources, for instance, and its surface composition can even be affected by use wear. Agreeing on a suite of analytical approaches that is capable of dealing with these complexities was one of the main aims of the network’s deliberations.

Another aim of the project was to revisit technological and typo-chronological aspects of Chalcolithic and Bronze Age gold artefacts, building on the superb foundations laid by Joan Taylor and George Eogan. It is clear that important discoveries in the forty years since the publication of Eogan’s seminal ‘Accomplished art’, coupled with our increasing understanding of how gold artefacts were crafted (as informed by goldsmiths and experimental archaeologists), means certain typo-chronologies require revision and interrogation. Collating artefactual data and collaborating with those who frequently work with gold allows us to identify shifts in technological trends with more confidence.

Ribbon torcs, for instance, were once considered a staple of Middle Bronze Age Scotland, yet now almost all are known to be technologically characteristic of the Iron Age. This impacts our current distribution maps, leaving a relative absence of goldworking evidence north of Wales in Britain during the Middle Bronze Age, and requires reconciling with the abundance of gold artefacts in southern Britain during the same period. Similarly, the revelation that Cornish gold was used to make lunulae in Ireland, north-west England and Scotland means it is time to think about Joan Taylor’s typological divisions and examine this relationship between object form and the origins of the gold.
Moreover, synthesising information on the artefacts from our regions revealed transformations and shifts in depositional practices, such as the combination of gold and bronze artefacts in hoards in Wales and south-west England, and periods where gold use seems to have declined – or, at least, became less archaeologically visible. It has long been recognised that goldworking evidence drops off at the end of the Late Bronze Age, c. 800 BC, but in the auriferous regions of Britain there are also conspicuous gaps in the deposition of gold objects around 1600 BC and again at 1100 BC. The Gold project is forcing us to question whether these are genuine gaps, or whether we need to start rethinking some of our typo-chronologies.

The research framework and research strategy that result from the network’s activities will serve to set the agenda for research into prehistoric gold. It is clear that a great deal needs to be done, from improving the documentation and characterisation of raw gold to deconstructing and understanding the changing compositional patterns in artefactual gold. International collaboration (for example, in establishing consistent analytical databases for raw and artefactual gold across Europe) is essential if we are to understand British goldwork in its broader European context; Brexit will be no bar to continuing this vital research. To this end, efforts are being directed to preparing a bid for a major international project which, among other activities, should include a lot more of Chris Standish’s excellent lead isotope analysis.

In the meantime, if you want to find out more about the network’s activities, visit https://www.nms.ac.uk/collections-research/our-research/featured-projects/prehistoric-gold/. This page provides links to blog posts on objects from the auriferous regions and links to other outputs, including a podcast by Chris. Additional frequent updates can be viewed on Twitter using #prehistoricgold. We are grateful to the AHRC for funding this project and to the research network members, without whom it would not have been possible. The time and expertise they continue to contribute help us all to understand the wonderful material that is gold.

Matthew G. Knight (M.Knight@nms.ac.uk) and Alison Sheridan, both National Museums Scotland, and Jana Horak, Amgueddfa Cymru – National Museums Wales

---

### Reading the rings – a Late Neolithic complex at Bidford on Avon

Excavation by Archaeology Warwickshire in advance of housing development at Bidford on Avon in 2015 located four small Late Neolithic sites in the corner of a heavily plough-eroded field. Negative results had been obtained from desk-based and geophysical survey, and also largely from evaluation trenching. Fortunately the finding of Neolithic sherds encouraged surface stripping that revealed the monuments.

The sites were of the kind normally subsumed under the title ‘hengiform’, but the excavators wisely preferred the neutral terms ‘pit ring’ (PR) and ‘ring ditch’ (RD). That wisdom was borne out by evidence of former mounds covering three of them: a circular island of subsoil over, and extending some 3 m around, RD 1; a medieval ditch petering out within PR 2 and a Late Iron Age/Romano-British trackway deflected around PR 1.

The monuments are small, oval (three of four), have shared orientations (three of four) and cluster tightly. Yet their subsoil signatures varied considerably. Ditches were shallow and the pits of only slight to moderate size – very variable around the circuit of PR1. Where bracketing the north-east causeway of PR1, however, they were massive. No all-encompassing explanation (e.g. as post extraction pits or as quarries) seems possible, although regularities in the spacing of three much smaller pits within RD1 hint at an internal stake/post circle.

---

Ring PR 2 under excavation
(© Archaeology Warwickshire)
The presence of cremations further linked three of the four sites, but again there were significant variations. The size of the deposits ranged from 0.9 g in each of the very large pits flanking the north-east causeway of PR1 up to 643 g on one side of PR2 and 7040 g (with an MNI of six individuals) on the other. In general, however, cremations were present only in token or incidental amounts and restricted to upper levels/final recuts. Causeway locations dominate. Bayesian analysis of their calibrated dates suggest all mortuary activity began and ended around the 29th century cal BC, with that at PR2 probably occurring first and taking place over a very short period. A similarly constrained time scale is indicated for RD1.

Small sherds of Grooved Ware were found in two of the pits of PR1: associated with cremated bone in a causeway pit and, in the north-west arc, adjoining a pit with a discrete cremation deposit set over a rare example of a possible dug-out post. Grooved Ware also came from a pit immediately outside the south-west causeway of RD2. Importantly, the ditch plans of RD1 and 2 mirror that of PR1, which has a secure terminus ante quem of 2800–2580 cal BC (SUERC-74938) from the above-mentioned cremation. Such ovate, opposed-causeway plans are associated with classic henges and have previously been considered to date no earlier than the second half of the third millennium cal BC.

The location of cremation deposits in upper levels and their token size indicate that the sites were not constructed primarily as cremation cemeteries. Instead, their tight dates suggest deposition in association with broadly contemporary closing events. Interestingly, a similar pattern of cremations concentrating in upper layers was noted by Atkinson at Dorchester on Thames.

Plough truncation prevents us from placing the mounds into the site sequences. An absence of grave pits need not, however, exclude the former presence of burials: site
I at Dorchester on Thames, protected by a low mound as late as 1938, produced a crouched inhumation on the old land surface. Surface-laid burial had considerable, Middle Neolithic, ancestry. Examples include Handley 26, the surface-built cist under Liff’s Low and the very shallow or surface-laid ‘prestige burials’ at Duggleby Howe (albeit the principal example lay over the top of a deep burial pit); burials D and C are dated just a century or so earlier than the Bidford cremations. None of these burials (or mound-placed cremations akin to those at Duggleby Howe) would have survived prolonged plough truncation. Continuity of rite, with the addition of cremations, into the Late Neolithic is plausible, enacted within smaller, house-referencing rings. The fact that Early Beaker round mounds were often small and defined by circuits reminiscent of the Bidford on Avon sites (e.g. Dorchester on Thames site XII and Chilbolton) hints at continuity beyond the Late Neolithic. Far from inexplicably vanishing during the first half of the third millennium BC, round barrow construction could have been continuous. If so, ‘reintroduction’ may represent less any cultural purity of incoming Beaker burial practices and more a local adoption as witnessed, but very differently, in Brittany and Ireland.

The functional correlation of a monument type (henge) with a funerary rite (cremation), predicated on an iconic site (Stonehenge) may have badly skewed our expectations. Time then perhaps to replace the ‘henge’ in hengiform with ‘ring’. Ringform communicates something of the sites’ morphological variability within a circular theme without presumption of lost above-ground structures. The question of the place of former mounds in site sequences, of course, remains. Answers will depend on exploratory sectioning of earthwork sites such as Amesbury 50 and Hindwell Farm II beneath which geophysical survey has revealed comparable features.

Roy Loveday, University of Leicester (r.e.loveday@btinternet.com); Laurence Jones and Stuart Palmer, both Archaeology Warwickshire (fieldarchaeology@warwickshire.gov.uk)

---

**Ladies in red (and white): a study of the beaded attires from Montelirio (Andalucía, Spain)**

The Montelirio tholos, dated to the 28th century cal BC, includes the largest collection of sumptuous objects and exotica ever found in a single tomb in Copper Age Iberia. Discovered in 1998 at the Valencina Copper Age mega-site, near Sevilla in south-western Spain, it was excavated between 2007 and 2010. This led to remarkable discoveries. The monument stands out architecturally, with earthen domes covering both its round chambers and cinnabar-coated slate slabs painted over with a variety of motifs. Those buried inside were mostly women, some of whose bones were heavily contaminated with mercury at the time of death, very probably in connection with the use of the red pigment cinnabar. One of them represents the earliest case of post-axial polydactyly known to date in Europe. In addition, there was a wonderful array of highly sophisticated artefacts, in most cases made in costly and exotic materials such as ivory, ostrich eggshell, rock crystal, mylonite, flint, amber and gold.

The individuals and their associated attires in Montelirio’s Large Chamber. Red: cinnabar patches; dotted lines: edges of areas altered in Antiquity (design: Marta Díaz-Guardamino Uribe)
Although a bulky monograph published in 2016 presented a detailed account of the tomb, its scientific potential is by no means exhausted. Ancient DNA analysis is currently under way at the Max Planck Institute in Jena under the supervision of Wolfgang Haak, as is the scientific characterisation of the unfired clay figurines and stela found inside the Large Chamber, coordinated by Mimi Bueno Ramírez (Alcalá de Henares University). In July 2019, we began the full study of the tens of thousands of beads found in both chambers of the tomb, as well as a smaller series of similar beads from neighbouring tomb 10.042-10.049, where the so-called ‘ivory merchant’ was buried – a young man surrounded by a sumptuous set of grave goods, including a complete elephant tusk.

Montelirio contained the largest known assemblage of beads ever discovered in prehistoric Iberia, or indeed western Europe, with very few (if any) parallels worldwide. They are believed to have formed various garments of beaded clothing, including at least two full-body tunics. Our study aims at a thorough characterisation of these textile productions from the viewpoint of (i) their technology, including morphometry and the raw materials used to make the beads, (ii) their use, including use-wear and phytolith analysis as well as specific associations with the amber and ivory pendants that were woven onto the attires and (iii) their social and ideological significance.

A preliminary challenge is to establish how many beads were recovered, their number being so huge that it is impossible to count them. Once an estimate of the size of the collection is made, specific questions must be answered regarding their production, use and social significance: how were they made, and how long did it take to make them? What degree of standardisation do they show? Were all the attires produced by a single group of manufacturers or were various groups involved (for example kinship/corporate units or communities of craftsmen)? Were they all made at the same time? What are the differences in raw materials, quality and finish of each attire, and what can this tell us about the individuals who wore them? How do differences in morphology/morphometry correlate with other attributes of each attire (i.e. size, shape and pendants) and of the individuals who wore them (age, sex, pathologies, others)? What can we learn by comparing the Montelirio beads with those from tomb 10.042-10.049 which has been ¹⁴C-dated to two or three generations earlier? Were the beads in both tombs made by the same people, given that tomb 10.042-10.049 may have been reopened and reused when Montelirio was built? What do the bead raw materials tell us about the symbolism of the attires, the social personae of their users and the worldview of makers and users? How exceptional are these attires on a worldwide scale?

In order to answer these questions, and considering the gigantic size of the collection currently kept at the Archaeology Museum of Sevilla, a five-step research protocol was devised to ensure a time-and-effort efficient approach as well as the representativeness of the conclusions. In step 1, we work out the total weight of the beads for each attire after cleaning and sieving the containers where they are kept (jars, boxes, bags) and removing stones and soil. We then select a random sample from each attire with a minimum of 100 beads and establish an estimated number of beads for each attire (based on the average weight of sampled beads). Once the estimated number of beads for each attire is known, in step 3 we use the selected sample to collect morphometric data, including maximum diameter, thickness, size of the perforation on both sides and weight. In step 4, we characterise the raw materials of the beads through microscopic inspection, SEM and thin-section petrography. Finally, step 5 comprises use-wear analysis of the sample, as well as phytolith analysis and radiocarbon dating.

At the time of writing (September 2019) the entire assemblage has been cleaned, involving the removal of 6.9 kg of intrusive stones and dirt that were mixed with the beads.
This slow and time-consuming task was undertaken by sieving, manual screening and ultra-sound cleaning. The entire collection of beads from both tombs amounts to 11.7 kg. Given that substantial portions of the Montelirio beaded attires (particularly that worn by individual UE 343) were consolidated in situ during excavation and kept as a block, a more accurate final figure would be in the region of between 13 and 15 kg. There is a huge difference to the earlier tomb, as Structure 10.042-10.049 only yielded 0.46 kg.

Morphometric data for a random sample of 1741 beads (selecting at least 100 beads per attire and including some smaller complexes) shows some interesting trends. In Montelirio’s Large Chamber (LC) maximum diameters range between 7 and 3 mm, maximum thicknesses between 3.8 and 0.6 mm, perforation diameters between 6 and 0.8 mm and weights between 0.19 and 0.01 g. The average weight in the LC is 0.0708 g. In the Small Chamber (SC) of this tomb, which was badly destroyed in Antiquity and where no identification of individual attires is possible, a single subsample of 100 beads has been taken. These are markedly smaller, with maximum diameters between 5.5 and 2 mm, thickness between 2.3 and 0.9 mm and weights between 0.05 and 0.008 g. The average weight in the SC is 0.0319 g. A full statistical analysis, currently under way, will provide more clues about possible significant morphometric differences between the attires, and the burial contexts they were deposit in. Considering the bulk weight data and the estimated average weights, the number of beads in Montelirio is in the region of one quarter of a million, representing a significant investment of time and resources.

Likewise, preliminary characterisation of raw materials reveals a widespread use of limestone and marine shells of various species, adding a shiny whiteness to the garments. Other materials include slate, marble and mother-of-pearl. A full study of the beads will therefore further enrich our understanding of the networks these societies commanded, the social context for displaying wealth and the place of sumptuous clothing within that.

Acknowledgements
The study of the Montelirio beaded attires is funded by the Andalusian Regional Government and the Palarq Foundation. Alongside the authors, the scientific team includes: Luis Cáceres Puro and Teodosio Donaire Romero (raw materials), José Ángel Afonso Vargas (phytoliths), Francisco Martínez-Sevilla and Manuel Altamirano García (technological analysis), Marta Díaz-Guardamino Uribe, Álvaro Fernández Flores and David W. Wheatley (photogrammetry, mapping and spatial analysis), Victoria Priola and Katina Lillios (textiles), Timothy Earle (input into the sociological interpretation).

Leonardo García Sanjuán1 (lgarcia@us.es), Carlos Rodríguez-Rellán2, José Antonio Lozano-Rodríguez1, Marta Cintas-Peña1, María Martínez Merino1
1 University of Sevilla 2 University of Santiago de Compostela 3 University of Granada

Notice of the 2020 (for 2019) Annual General Meeting

The AGM will be held on Saturday 20th June 2020 at 4.00pm at Lecture Theatre 1, Bennett Building, University of Leicester.

Agenda
1. Minutes of the Annual General Meeting held in St Helier, Jersey on 15th June 2019 (papers available from the website or from the Honorary Secretary)
2. President’s report
3. Secretary’s report
4. Editor’s report and R. M. Baguley Award
5. Treasurer’s report
6. Subscription increase
7. Report on meetings, study tours and research days
8. Awards
– Collections Study Award
– John and Bryony Coles Award
– Research Grants (Bob Smith Award and Leslie Grinsell Award)
– Conference Fund
9. Election of officers and members of Council
The meeting will be followed at 4.30pm by the 29th Europa Lecture by Prof Colin Haselgrove (University of Leicester): New places, new faces, new horizons: what shaped European societies at the end of prehistory? The lecture will be followed by a wine reception.

Registered Office: University College London, Institute of Archaeology, 31–34 Gordon Square, London WC1H 0PY.
Notes
1. A member entitled to vote at the meeting may appoint a proxy to attend and, on a poll, vote in his or her stead. A proxy must be a member, other than an institutional member.
2. To be valid, an instrument of proxy (together with any authority under which it is signed or a copy of the authority certified notarily or in some other way approved by Council) must be deposited with the Secretary, The Prehistoric Society, c/o Department of Britain, Europe & Prehistory, The British Museum, Great Russell Street, London WC1B 3DG, by 4.30pm on the 15 May 2020.
3. Forms of proxy may be obtained from the Secretary at the above address.

The Prehistoric Society 2019

This report covers the period of January to December 2019.

Lectures, meetings and study tours

The Society has continued to fulfil its commitment to reach a wide range of regional audiences and to promote its aims and objectives through varied lectures, conferences, and tours throughout Britain and Ireland. In July, Professors Josh Pollard and Mark Gillings led members on a tour of their excavations at Avebury. The number of collaborative events organised with other archaeological bodies and societies continues to increase, in the last year we have held 12 events; full details are archived on the Society’s events page. This year, Ötzi the Iceman featured heavily with multiple talks from Prof Klaus Oeggl, and Stonehenge continued to hold a special place with talks from Dr Jim Leary and Prof Mike Parker Pearson. Joint lectures were given with the Cambrian, Cork, Yorkshire, Cambridge, Devon, Cornwall, London and Middlesex, Norwick and Norfolk, Welwyn, Scarborough, Cumberland and Westmorland, and Leicester Archaeological Societies. We also supported the third annual Pitt Rivers Lecture at the University of Bournemouth, this year delivered by Prof Ruth Tringham and entitled ‘Fire: friend or fiend in human history’.

In October, Matt Knight delivered the 18th Sara Champion memorial lecture at the Society of Antiquaries, reviewed in this issue of PAST.

We continued to support the Later Prehistoric Finds Group, who held their day conference in October at the National Museum of Scotland titled ‘Crafting identities: new research on later prehistoric finds’, as well as the Iron Age Research Student Symposium, held at Liverpool (PAST 93), and the Neolithic and Early Bronze Age Research Student Symposium, held at Worcester (reviewed in this issue). The Society’s springtime one-day conference was organised by Dr Stuart Needham and focused on ‘Landscapes of the Dead’ (PAST 92).

Europa Prize

Dr Alison Sheridan (National Museum of Scotland) was the 2019 recipient of the Europa Prize. The theme of the conference, held in Jersey, was ‘Neolithic connections: Britain, the Channel Islands and France’. The Society’s AGM followed (see below) and the day culminated in the presentation of the Europa award to Dr Sheridan, who then delivered the Europa lecture (see PAST 93).

Research Grants

Research grants were awarded to Rupert Birtwistle (Leicester) for excavation of a Late Lower Palaeolithic site in western Azerbaijan; Tristan Carter (McMaster) for AMS dates for the Neolithic site of Preston in Suffolk; Alexandra Fitzpatrick (Bradford) for faunal analysis of the remains from Covesea Caves in Scotland; Biserka Gaydarska for AMS dates for the Varna cemetery in Bulgaria; and Christian Hoggard (Aarhus) for OSL dates and analysis at Late Palaeolithic Hacklingen in Germany.

Grants from the conference fund were made to M. Lambert (Durham), L. Sewell (Bournemouth), and L. Valdivia (Oxford) to attend a range of high-profile conferences in 2019. A SUERC Award went to Peter Hommel (Oxford) for samples from Sukhakit in eastern Siberia.

The John and Bryony Coles Award was granted to Luke Dale (Durham) to examine hand axes at the Royal Ontario Museum in Toronto, and Arthur Grainger (Otago) for fieldwork in the Mariana Islands. The James Dyer Prize was awarded to Gary Lock (Oxford) for fieldwork at the Nescliffe Hill hillfort. The Bob Smith Prize was given to Goce Naumov (Delčevo) for fieldwork at the Neolithic tell site Vrbjanska Čuka, Macedonia. The Leslie Grinsell Prize was awarded to Anne Teather (Manchester) for fieldwork at Tenant’s Hill, Dorset.

The Annual General Meeting for 2018/19

The AGM was held on Saturday 15th June 2019 at 4.00pm in Jersey, after the 28th Europa Conference and immediately before the Europa Lecture. The President reported on a very busy, yet successful year, providing details of the Society’s core activities, publications, lectures, conferences and excursions. It was noted that subscription rates may need to increase in coming years, with due notice to be given to members. The President then thanked all Council and members who have assisted with events during the year. Warm thanks were offered to retiring officers and Council members: Vice President Nicky Milner, secretary Neil Wilkin, and council members Elizabeth Walker and Andy Jones.

The following officers and members of Council were elected and re-elected:
President
Prof Clive Gamble
Vice-Presidents
Prof Joanna Brück
Dr Melanie Giles
Dr Roy Loveday
Prof Jackie Mulville
Treasurer
Dr Clare Randall
Secretary
Dr Rachel Crellin
Managing Editor/Editor of PPS
Dr Daniela Hofmann
Editor PAST
Dr Julie Gardiner
Editor, Prehistoric Society
Dr Daniela Hofmann
Research Papers Series
Dr Mike Allen
Book Reviews Editor
Ms Pippa Bradley
Meetings Secretary
Dr Matthew Knight
Conservation Co-ordinator
Dr Laura Basell
Governance Officer
Dr Sophia Adams
Council
Dr Richard Brunning
Dr Helen Chittock
Dr Peter Clark
Dr Ben Geary
Dr Jodie Lewis
Dr Anne Teather
Dr Leo Webley
Ms Annabell Zander

The Baguley Award
The Baguley Award (for best paper in Proceedings of the Prehistoric Society 85) was awarded to Peter Rowley-Conwy (University of Durham) and Kurt Gron (on behalf of all their co-authors) for their paper ‘A meeting in the forest: hunters and farmers at the Coneybury Anomaly, Wiltshire’.

Undergraduate Dissertation Prize
As in previous years, each University department was invited to submit one dissertation for the Society's Undergraduate Dissertation Prize. The winner was Molly Hardman (York). Three runners-up were highly commended for their work: James Clark (Cambridge), Amelia Halls (Manchester), and Robert Kenyon (Sheffield). The awards were made after the Sara Champion memorial lecture in October at the Society of Antiquaries, and are reported in this issue of PAST.

Publications
During 2019, the Society published Volume 85 of the Proceedings of the Prehistoric Society, which contained 12 refereed papers covering topics from the destruction of Bronze Age metalwork to the Irish ‘royal sites’. As usual, three editions of PAST, the Society's newsletter, were published during the year.

In addition, the society published three new research paper volumes under the editorship of Mike Allen. The much-anticipated ‘Beaker People’ by Mike Parker Pearson and colleagues was published in April and quickly sold out its first print run. Eszter Bánffy published ‘First Farmers of the Carpathian Basin’, expanding the geographical scope of the series. Finally, our former president Alex Gibson edited ‘Bell Beaker Settlement of Europe’. The books are all excellent examples of the best current research in their fields and a testament to the skills of their authors and editors.

Advocacy
The Society continued its active role in advocacy with letters to the national press relating to EU research funding for prehistory in light of Brexit, support for the pay and conditions of field archaeologists in Ireland, and in relation to the Stonehenge Tunnel plan by Highways England. A letter of support was sent to the Brazilian National Museum following their fire. Links were reconfirmed with the European Association of Archaeologists in the wake of Brexit, and Society representatives attended the EAA conference in Bern in September 2019. The Society continued to support the inclusion of prehistory in the primary school National Curriculum by pursuing the goal of offering a range of free and trusted teaching resources on the Society website and providing assistance to teachers.

Membership and administration
Membership is healthy. The Society's online and social media presence has developed considerably in the last year, with 4700 followers on Twitter (up from 3950 last year) and 14,500 members on Facebook (up from 10,858 last year).

As ever, the Society would not be able to function without a large number of individuals giving freely of their time and knowledge to organise events and to deliver the results of their fieldwork and research. The Society offers sincere thanks to all those who have helped throughout the year, and especially to its administrator, Tessa Machling.

Making a noise in the past – investigating the carnyx in Iron Age Europe

A recent publication on Iron Age animal-headed war horns (carnyces) from across Europe may be of interest to Prehistoric Society members. Starting from the famous carnyx head from Deskford in north-east Scotland, the volume reviews the local Iron Age context, analyses decorative metalwork traditions in north Britain, and re-investigates hoards and deliberate deposits across the area. It then turns to a broader European view of carnyces, analysing both surviving fragments and depictions in classical imagery, on coins, sculpture and artefacts. Questions of biases and meanings are considered, along with how the Roman world chose to depict ‘barbarians’ through material culture, and what use can be made of this iconography to understand a prehistoric past.

The book is jointly published by the Römisch-Germanisches Zentralmuseum in Mainz and National Museums Scotland. As a special offer to UK-based Society members it is available for £55 plus £10 postage. Go to the National Museum’s online shop at https://shop.nms.ac.uk/, search for “carnyx”, and enter “PREHIST19” as the offer code at checkout.
Prehistoric Society Undergraduate Dissertation Prize 2019

The awards to the winner and three runners-up for the Society’s 2019 Undergraduate Dissertation Prize were presented at the Society of Antiquaries before the Sara Champion lecture. The overall winner of the prize was Molly Hardman from the University of York, whose research combined archaeological and experimental studies on ‘Magdalenian minds: an evaluation of the role of cognition in mobiliary art of the Magdalenian’. Molly received three years’ free membership of the Society, her choice of one of the Society’s in-print monographs, a cheque for £100 and the opportunity to submit an abridged version of her dissertation for publication in the Proceedings. The three runners-up, each receiving a year’s membership of the Society, were James Clark (University of Cambridge: ‘Handaxe origins in Europe: a preliminary investigation of models using two-dimensional geometric morphometrics’), Robert Kenyon (University of Sheffield: ‘Stone of contention: a desk based archaeological and palaeoanthropological survey of Middle Pleistocene Southeast Asia’) and Amelia Halls (University of Manchester: ‘Considering our canine companions: human-dog and human-wolf relations in the Mesolithic’). Overall, the judges of the prize were very impressed with the quality of the winning dissertations and with that of all the submitted work this year.

Prehistoric Society Undergraduate Dissertation Prize 2020

The Prehistoric Society invites submissions for the 2020 undergraduate dissertation prize. The award celebrates the dissertation that has made the greatest contribution to the study of prehistory in any part of the world. The prize is open to students from any University in Britain and Ireland. Each Department is invited to submit one dissertation by a candidate who completes her or his degree during the 2019/20 academic year. The judges will assess entries on the basis of the quality of work, the originality of the approach and the degree to which the research advances our understanding of prehistory. The final decision is at the discretion of the Society.

The winner will receive three years’ free membership of the Society, the choice of one of the Society’s in-print monographs and £100. An abridged version of the successful dissertation will be considered for publication in the Proceedings. Three runners-up will be awarded a year’s free membership and will be invited to the award ceremony, where they will be presented with a certificate. Highly commended entries will also receive a year’s free membership. The Prize will be presented prior to the Sara Champion lecture on the 21st of October 2020.

This prestigious award represents an excellent opportunity for outstanding young scholars to have their work publicly recognised, in the magnificent setting of the Society of Antiquaries, Burlington House in Piccadilly. Entries for the current academic year are to be sent as a single PDF document by the nominated staff representative of the host department to Dr Melanie Giles at melanie.giles@manchester.ac.uk by Friday 17th July. (Please note: we will not accept entries directly from the student). It is advised that the file name comprise the student’s name and institution. Entries can only be accepted if accompanied by the email address, postal address and contact phone number both for the candidates and for their supervisors.

The Sixth Neolithic and Early Bronze Age Research Student Symposium, University of Worcester 2019

On Friday 22nd and Saturday 23rd November 2019 the Neolithic and Early Bronze Age Research Student Symposium (NEBARSS) was for the first time brought to the Midlands. Organised by Jack Rowe at the University of Worcester, the event was kindly sponsored by the Prehistoric Society, the Council for British Archaeology West Midlands, the University of Worcester and Oxbow Books.

Sadly Jodie Lewis (Worcester) was unable to present the planned keynote lecture on Friday evening. Fortunately,
NEBARSS co-founder Mike Copper (Bradford) saved the day by delivering a paper on ‘The mysterious Neolithic islets of the Outer Hebrides’ in which he related recent work on and around a series of artificial islets with particular emphasis on their often spectacular ceramic assemblages. Numerous questions followed and lively discussion continued during the following wine reception.

Papers on Saturday morning began with perceptions of the dead. Eirini Konstantinidi (Cardiff) discussed a taphonomic approach to Neolithic mortuary treatment in the caves of south-west Britain, exploring burial practices through macro- and microscopic analysis of disarticulated remains. Jess Thompson (Cambridge) followed with an exploration of the politics of personhood of the dead in Neolithic Malta. Hannah Bullmore (UCL) then offered an insight on her current research reconsidering the domestic architecture of the Early Bronze Age, demonstrating that these early houses were more permanent and more widespread than currently believed. Rhys Morgan (Southampton) reassessed the context of the hearth as an important architectural element within Late Neolithic Orkney, both in domestic and ‘specialised’ settings, such as the Ness of Brodgar’s Structure 10.

After coffee, Heather Merchant-Taylor (Worcester) summarised her near-complete research examining the often overlooked single standing stones of north Somerset. Susan Greaney (Cardiff) then followed with a discussion of the perception of time during the Neolithic, using a relational view of temporality to offer a new understanding of the use, reuse and development of the Dorchester monument complex. Roger Cleverley (York) continued on the theme of time by considering the development of the Late Neolithic/Early Bronze Age monumental landscape at Fylingdales, North Yorkshire, where pre-existing barrows, cairns and rock art panels influenced the location of later monuments and art.

After lunch, Nathan Gubbins (Leicester) offered a Deleuze-inspired interpretation of the Finglenny Early Bronze Age axe hoard found near Wormy Hillary henge, Aberdeenshire, with new ideas on the emergence of hoarding practices in Bronze Age Scotland. Jake Rowland (Southampton and Bristol) then shared the preliminary results of his analysis of the polished rectangular flint knives from North Dale, East Yorkshire – a site he suggested was highly significant for both their production and destruction. Claire Copper (Edinburgh) explored the relationships between the Beaker cultures of northern Britain and the near continent, examining the formal, decorative and technological traits of Beakers to determine if the two populations shared a social identity.

In the final session Justin Ayres (Sheffield) focused on the unusual assemblage of animal bones from around Structure 10 at the Ness of Brodgar, suggesting that particular bones from different animals (notably cattle and red deer) held different meanings to those who deposited them. Edward Shepherd (Birkbeck, London) then described his research re-examining assemblages of cattle bones from Wiltshire earthen long barrows, questioning how representative of typical Neolithic herds they may be. Finally, David Osborne (Nottingham) discussed the place of wild animals in Neolithic worldviews, challenging narratives of domestication that dominate the literature.

Bringing the conference to a close, our second keynote speaker, Richard Bradley (Reading), revisited some of the themes explored in his book An archaeology of natural places, discussing the blurred distinction between natural features and monuments and the notion of ‘found architecture’.

In addition, posters were presented by Fiona MacColl (Edinburgh) on social networking at Brú na Bóinne, and David Osborne on diet and mobility in Neolithic and Bronze Age Lincolnshire and the Fens.

Many thanks to all the speakers for providing such a wide range of fascinating papers and posters, to our sponsors and to all those who attended. NEBARSS 2020 will be held at Birkbeck, University of London. I wish the organisers all the best and am already looking forward to attending.

Jack Rowe, University of Worcester (nebarss.conference@gmail.com)
October 30th 2019 saw the gathering of prehistorians at Burlington House for the 18th annual Sara Champion lecture. This year, the invited speaker was Dr Matt Knight, Curator of Chalcolithic and Bronze Age collections at National Museums, Scotland. Matt took up this post in 2018, having completed an AHRC-funded PhD at the Universities of Exeter and Bristol, entitled *The Intentional destruction and deposition of Bronze Age metalwork in south west England*. His lecture summarised the results of this research project, supplemented with material he has encountered since beginning his new role, covering how he has linked the destruction and deposition of Bronze Age metalwork to ideas about personhood. October 2019 also saw the delivery of a press release on the Havering Hoard, a Late Bronze Age hoard found in East London in 2018. The find was reported in several media outlets as having ‘baffled’ experts, much to the amusement and frustration of archaeologists. Matt used this hoard, and the way it was reported, as a topical introduction to one of the central aims of his work: to increase understandings of metalwork deposition by questioning dualistic interpretations of the practice as either mysterious or mundane.

Matt presented a range of case studies, travelling from Devon to Lanarkshire, and using these examples to demonstrate the varied processes associated with Bronze Age metalwork deposition. Sometimes, these were dramatic and unusual, leading Matt to argue that deposition events were designed to be remembered by those who witnessed them. One of the ways in which Matt’s research is reaching more nuanced understandings of these practices is through examining the treatment of objects prior to deposition. His PhD research included an extensive experimental study on the deliberate destruction of bronze objects, and audience members were lucky to be able to handle some of the fragmented bronze replicas resulting from this work as he described the study.

A key conclusion was that the thousands of incomplete bronze objects recovered as stray finds across the UK were not accidentally broken and carelessly discarded by the itinerant smiths who had retained them as scrap metal. Rather, destruction and deposition were deliberate acts with important social functions.

Matt asked an important question during this talk: what’s the point of breaking things? Indeed, deliberate destruction may appear at odds with the way in which we would expect valued items to be treated, even in prehistory. Matt’s lecture, however, very successfully addressed this point by removing the negative connotations of destruction and rebranding it as a creative process driven by complex motivations.

Helen Chittock, AOC Archaeology (helenchittock@gmail.com)

**A submerged forest, intertidal archaeology and a Bronze Age butchery site at Lionacleit, Benbecula (Western Isles). The story so far.**

Preliminary results of investigations of intertidal peat and archaeological remains at Lionacleit, Benbecula have revealed a Mesolithic and Neolithic woodland landscape, fragmentary walls of a prehistoric settlement and a possibly unique Early Bronze Age butchery site. They lie in the intertidal zone because of coastal erosion which, since the 1970s alone, has stripped away 30–90 m of machair within the study area.

These remains, hiding in plain sight until noticed by local residents, demonstrate the potential of the coastal and intertidal archaeological resource. The circumstances of discovery also highlight the critical role of the local community in monitoring dynamic shorelines.

The site was brought to SCAPE’s attention by Anne Corrance Monk. SCAPE (Scottish Coastal Archaeology and the Problem of Erosion) has worked with local residents on community projects at eroding archaeological sites in Scotland for 20 years. Intertidal archaeology is particularly vulnerable so we were interested in learning more about these remains before they deteriorated further.
Intertidal peat, but not the actual sub-fossil remains of trees, has previously been investigated at Borve, Lionacleit by Ritchie, Edwards and Whittington. The peat survives intermittently across a boulder-strewn bedrock platform, and is more or less visible depending on the covering of sand. From around 100 m into the intertidal zone, erosion has revealed tree roots and branches. We selected a sample area of 30 × 60 m for detailed investigation of the tree remains and associated peat. Volunteers mapped every visible wood fragment and sampled each one for microscopic identification, much of which was carried out by volunteers during high tide at the UHI campus in Lionacleit. Pupils from Lionacleit School helped us visualise the forest by standing on each tree stump to recreate the life position of the tree.

Using a gouge auger we mapped the subsurface extent of the submerged forest layer and vertical sequence of deposits along a 200 m transect between the mean high and low water springs, and dug a test pit near to an exposed tree stump to recover
samples for radiocarbon dating and paleo-environmental analysis. We also surveyed all visible archaeological features using DGPS and drone aerial photography.

Radiocarbon dates returned from the sedimentary sequence through the peat containing wood show that the submerged forest is of likely Late Mesolithic (6066–5931 cal BC, SUERC 85850) to Early Neolithic age (4043–3947 cal BC, SUERC 85852). These compare well to other tree remains in Uist dated by Fossit.

Wood identifications showed a predominance of willow with presence of birch and Scots pine. This is the first identification of birch and willow tree remains in Benbecula and the first recording of Scots pine tree remains in Uist. Preliminary pollen assessment aligns well with this picture. Wet willow woodland was established at Lionacleit by 4338–4084 cal BC (SUERC 85851), becoming increasingly invaded by birch. Pine pollen increased through the profile. The dominance of grass pollen indicates this was relatively open woodland. Sedges, meadowsweet and cowbane sp. were also present and indicate marshy ground. *Amara sp.* beetle fragments, an insect that usually inhabits open and dry areas such as woodland margins, and *Pterostichus strenuus*, a woodland floor dweller, also support a wet, open wooded landscape. High ratios of microscopic charcoal at the base of the pollen diagram point to a local burning event, possibly associated with activities of Mesolithic communities. This adds to the growing body of evidence of the potential impact of Mesolithic peoples on the regional vegetation.

Possible stone structures were also revealed. They comprised a 16 m length of sinuous walling; one sub-circular ring of stone, c. 4 m in diameter, and a further short length of stone of c. 5 × 1.8 m, resting unconformably upon sand-covered peat. Further seaweed clearance may reveal more possible structures. A radiocarbon sample from peat beneath the wall returned a Neolithic age of 3519–3365 cal BC (SUERC 85845) providing a *terminus post quem*. A saddle quern was also recovered.

A concentration of animal bone and quartz tools eroding from a peat bank was completely excavated and the material analysed by Catherine Smith, Torben Bjarke Ballin and Mary Harman. Except for one water-rolled shaft of a small ungulate, all animal bones were cattle remains from a single semi-articulated individual. Tooth wear and metacarpal measurements indicated the animal was mature and of small stature, standing at around 110 cm.

Groups of parallel cut marks were present on the skull, mandible, scapula and various long bones. The ribs were covered in multiple long scratches along the ventral surface, suggesting a scraping action. A radiocarbon date on a bone sample showed the animal died in the Early Bronze Age between 1875–1627 cal BC (SUERC 85843). The peat shelf from which the animal bone and struck lithics were eroding was dated to 2136–1950 cal BC (SUERC 85844).

The ‘smoking gun’ for the cut marks was the close association of 29 freshly struck quartz lithics, several found in direct contact with the bone. The lithics were struck from nodules probably derived from the same local vein. Most of the assemblage was debitage (seven chips and 20 flakes) whereas...
two were tools: a side scraper and one piece with edge retouched.

The close association of a tool assemblage directly relatable to butchery marks on a single individual makes a compelling case that this is a rare chance survival of a single action in prehistory preserved in the archaeological record. The only other example of a similar find in the region is that excavated by Colin Richards at Skaill Bay, Mainland Orkney. Here coastal erosion in 1992–93 had exposed faunal remains, mainly of red deer, associated with quantities of Skaill knives representing a Late Neolithic butchery site, possibly an off-site butchery area for nearby Skara Brae.

The isolated butchery site at Lionacleit makes it difficult to infer the context in which the activity took place, but the lithic assemblage and the cut marks do tell us something about the decision making processes, technology and skill of the person/people who made the tools and processed the animal. It would appear that nodules were brought to the animal and struck ‘on the fly’, and that unmodified flakes were employed as single-use knives and discarded, along with at least two tools, when the job was done. Whether or not this relates to the wider settlement hinted at by the saddle quern and stone structures we will never know.

We would be very interested in hearing from anyone who has encountered a similar butchery assemblage and from anyone who is interested in carrying out further study of the butchery evidence on this one.

Acknowledgements

We would like to thank all the volunteers who made this project so enjoyable and productive. A big thank you to Caitriona MacCuish, Museum Development Officer at Museum nan Eilean and to the staff and S1 and S2 pupils of Sgoil Lionacleit for bringing the forest to life. Special thanks to Anne Corrance Monk and Simon Davies for bringing the site to our attention and for continuing to keep an eye on it.

Joanna Hambly, SCAPE, University of St Andrews (jh105@st-andrews.ac.uk), Scott Timpany, UHI, Orkney

Tracking the initial dispersal of modern humans into the Americas

When did modern humans first arrive in the American continent? This question, in a nutshell, is the focus of my three-year PhD thesis at the Oxford Radiocarbon Accelerator Unit (ORAU). For years it was believed that humans first entered the continent after the last Ice Age (around 13,000 years ago) from Asia, through the Bering land bridge (Beringia; modern-day north-eastern Siberia, Alaska and Yukon) and an ice-free corridor between two ice sheets (Cordilleran and Laurentide), in the pursuit of megafauna. Once in North America, these early settlers developed the Clovis culture, named after characteristically ‘fluted’ stone points, and their descendants then spread throughout the continent, reaching the southernmost tip of South America in the warmer Holocene. This hypothesis, known as ‘Clovis first’, was effectively refuted in 1997, however, when an archaeological site in southern Chile, named Monte Verde, was found to be at least 1,000 years older than Clovis. This discovery broke with the logic that if humans first arrived from Asia via Beringia, sites in North America must be older than those in South America. As such, First Americans research currently lacks a model with which to explain all available evidence. Important questions effectively answered by Clovis-first – when, why, how and through where modern humans initially entered the continent – now remain largely unanswered.

My PhD focuses first and foremost on the variable of time and attempts to tackle this issue by developing a chronological framework through the use of radiocarbon dating and Bayesian age modelling. Radiocarbon dating facilitates the construction of reliable chronologies for archaeological sites, whilst Bayesian age modelling enables the analysis of radiocarbon data alongside archaeological information (stratigraphic context, for example) in a formal, statistical approach. When used in tandem, they have the potential to elucidate large-scale spatial and temporal patterns in human dispersals as evidenced by the archaeological record. This approach, termed ‘chronology-building’, was developed at the ORAU and has been used to explore the inhabitation of Eurasia by modern humans and Neanderthals during the Middle to Upper Palaeolithic transition. Chronology-building at a continental scale, however, has yet to be applied to the study of human migrations in the Americas.

Seeing this research opportunity, my work began by building Bayesian age models using previously-published information for archaeological sites in Beringia and North America, and incorporating these into larger, culture-specific models. This allowed me to obtain time estimates for the beginning and end of key cultural traditions found across the region – Clovis,
Western Stemmed and Beringian – and compare the results. Then, I increased the resolution of culture-specific models by incorporating new radiocarbon dates obtained using the most rigorous decontamination methods. The only Clovis human remains yet found (Anzick-1, a male infant), for example, were dated through the isolation of a single amino acid (hydroxyproline) instead of bulk bone collagen, as they likely contained contaminants introduced during curation efforts, such as adhesives or consolidants (this work was published in the Proceedings of the National Academy of Sciences of the United States of America, 2018). Finally, data obtained were framed against any relevant biological, cultural, climatic and ecological processes occurring at the time.

In short, results suggest that humans were likely present in the Americas before, during, and after the Last Glacial Maximum (occurring between 26,000 and 18,000 years ago), but that the effective occupation of Beringia and North America – as evidenced by the roughly coeval emergence of multiple, distinct material cultures – did not begin until a later, warmer period (Greenland Interstadial 1). Combined with findings that suggest the ice-free corridor became biologically available only after 13,000 years ago, this implies that humans initially entered and settled the continent sooner than previously thought and through a different route. It is thus possible, as some researchers contend, that humans first arrived in the continent by tracking along the Pacific coastline, taking advantage of marine resources and employing specialised technology. Moreover, this chronological framework breaks away from current estimates for the genetic divergence of pertinent human populations. The split between ancestral Native Americans and Siberian populations, for instance, likely occurred only after 23,000 years ago. This suggests that the peopling of the Americas was a complicated process, and much is yet unclear. Indeed, through this work, there are now more questions than answers and only continued interdisciplinary research will paint a more cohesive image of this dispersal event, one of the last steps taken by modern humans in their global expansion.

Lorena Becerra Valdivia, University of Oxford (lorena.becerravaldivia@arch.ox.ac.uk)