NEOLITHIC STUDIES GROUP

SPRING EVENTS 2021

Online Conference: New Directions in Research

On the afternoons of Friday 14th and Saturday 15th May we will be hosting an online conference detailing new directions in research in Neolithic studies in the UK and Ireland (with a little diversion to Spain as well!). Abstracts below.

Friday 14th May
12.00 Digital doors open
12.15 Introduction

12.20 Laura Basell et al. Dartmoor Tor Enclosures Survey – "DATES"

12.45 Kenny Brophy and Andrew Watson. Death B.C. – Barrow Columbaria: the new wave of barrow construction in the UK

13.10 Feliciano Cadierno. The use of digital image analysis in Schematic rock art, the case of El Bierzo (León, Spain).

13.35 Mike Copper. Tracing the Lines: Scottish Grooved Ware Trajectories Beyond Orkney

14.00 Coffee break

14.15 Antony Dickson. Flakes. fragments and tools: the use and deposition of volcanic tuff in the north-west of Britain.

14.45 Mike Efstathiou. Knock, knock… "anybody here??" Population and environment ~6100 cal bp: who and what did the first farmers encounter when they first arrived in Pembrokeshire?

15.10 Angela Gannon. Seeing is believing...and how do we believe what we see?

15.35 Jessica Smyth et al. Surplus or stress? Investigating the drivers of passage tomb construction in the Irish Sea Zone

15.45 Discussion

16.00 Close

Question and Answer Session:

Focus on Passage Tomb Monuments

Friday 14th May 6-7pm we will be hosting a Question and Answer session and panel discussion between:
Dr Kerri Cleary, Prof Chris Scarre, Prof Muiris O Sullivan, and Dr Elizabeth Shee Twohig.

Saturday 15th May

12.00 Digital doors open

12.15 Introduction

12.20 Susan Greaney and Peter Marshall. Proto-henges and mortuary circles: a new chronology for Flagstones and some implications for the middle Neolithic

12.45 Eirini Konstantinidi. A taphonomic approach to Neolithic mortuary treatment in the caves of southwest Britain.

13.10 Jon Morris. A Neolithic Universe

13.35 Gail Higginbottom. First Forays – using 2D and 3D modelling to recover perceptions of the Neolithic world in SW Britain.

14.00 Coffee break

14.15 Stephen Sherlock. An early Neolithic saltern at street house, north East Yorkshire

14.45 Emma Watson. Northern England - continuing neglect?

15.10 Nicki J. Whitehouse et al. An 'Everglades-like' landscape? Human-environment interactions within the riverscapes and wetlands of the Humberhead Levels, UK

15.35 Isabel Wiltshire. Investigating Early Neolithic ceramics and diet in Britain through stable carbon isotope analysis and compound-specific radiocarbon dating of absorbed lipid residues in pottery.

15.45 Discussion

16.00 Close

Registration

Conference Afternoon 14th May

https://www.eventbrite.com/e/neolithic-studies-group-online-spring-meeting-14th-may-tickets-150163995553

Conference Afternoon 15th May

https://www.eventbrite.com/e/neolithic-studies-group-online-spring-meeting-15th-may-tickets-150164904271

Q&A Evening 14th May

: https://www.eventbrite.com/e/neolithic-studies-group-online-spring-meeting-qa-tickets-150043362737

NEOLITHIC STUDIES GROUP

Spring Online Conference 2021

Abstracts

Dartmoor Tor Enclosures Survey – 'DATES'

Laura Basell (Leicester University) **L. S. Bray, A. Crabb, H. Webber, S. Randall, C. Graham, C. Derry, M. Horton, S. Morriss** l.basell@leicester.ac.uk

This paper will provide an overview of DATES and present the results of selected new analyses at the tor enclosure sites of White Tor, Dewerstone and a new site, Knowle Wood. Tor enclosures form part of a broader trend in landscape enclosure and monumentalisation seen across Britain during the fourth millennium BC along with shifts in landscape use, subsistence strategies, lifeways and material culture. A fundamental characteristic of tor enclosures is that areas of high moorland are enclosed by stone banks which incorporate one or more rock outcrops. Even with significant tree cover, these sites would have afforded extensive views of the surrounding areas. Like many of the broadly contemporary causewayed enclosures, tor enclosures are closely associated with waterways. Davies (2010) has argued that they mark the highland/lowland interface, possibly on transhumance routes, and also explores potential cosmological meaning. For the Cornish tor enclosures, he noted a recurring relationship with chambered tombs (Davies 2010).

'DATES' was conceived as the first part in a longer term and larger-scale project. The initial aims were to develop an improved understanding of the precise age, function and broader prehistoric landscape context of three sites using a geoarchaeological landscape methodology. Following field visits, a desk based analysis of multiple extant datasets and GIS was used to inform a high definition multi-scalar surface and sub-surface survey strategy. Evaluation trenches were excavated at two sites to obtain palaeoenvironmental and dating samples. To date, four of the eleven Cornish sites, have been excavated: Carn Brea, Helman Tor, Carn Galva and Bosporthennis Quoit (Mercer 1981, 1997; Jones 2019). Carn Brea and Helman Tor have been radiocarbon dated to the fourth millennium cal BC. None of the Dartmoor Tor Enclosures have been chronometrically dated and beyond RCHME surveys, no fieldwork had been conducted on these sites since Antiquarian investigations.

Death B.C. – Barrow Columbaria: the new wave of barrow construction in the UK

Kenny Brophy and Andrew Watson (University of Glasgow) Kenny.Brophy@glasgow.ac.uk

Since 2014, a growing trend has emerged in the funerary business in the UK – the construction of columbaria that are inspired by Neolithic burials monuments such as long barrows, long cairns, passage graves, and round barrows. A columbarium is a building or

structure that houses cremated human remains within containers held in niches. The first of these was The Long Barrow, All Cannings, designed by Tim Daw, and located a short drive from West Kennet. Since then, at least 10 further barrows have either been built, or are in the planning process, from southern England, to Perth, and Wales to Milton Keynes. Death B.C. is a British Academy Leverhulme funded project that starts in summer 2021, and so in this paper, we will discuss the story of the Barrow Columbaria phenomenon to date, and outline our plans for the coming 18 months. We are keen to explore the intersections between the Neolithic and contemporary society, and what the emergence of these columbaria may mean for our attitudes towards death and burial today.

The use of digital image analysis in Schematic rock art, the case of El Bierzo (León, Spain).

Feliciano Cadierno (University of Valencia) felicianocadierno@hotmail.es

The Neolithic expansion process in the northern Spanish plateau is well known, except for the province of León. One of the most characteristic manifestations of prehistoric societies from the Neolithic to the Bronze age in Spain is the schematic rock art. This type of rock art in the region of El Bierzo is a great unknown both for science and for the inhabitants of the region themselves.

The first work about rock art in the province of León was made by Julian Sanz Martínez in the decade of the ’20s. The author already reflected at the time that the caves were artificial, although he opted for a Neolithic chronology for their construction. Recent research has shown that they are caves of Roman and late medieval origin.

In 1982 the rocky crest of Peña Piñera (Sésamo, Spain) was explored and a group of professors from the University of León could verify the authenticity of a large concentration of Schematic rock art, publishing in 1986 the monography about the site recording 351 paintings in the area. After Peña Piñera, Castrocontrigo and Librán were the next rock art sites to be discovered in the region.

Since the year 2013, and thanks to the use of computer software for digital picture analysis, we could expand the number of representations in these sites, from 351 in Peña Piñera to 698 and being able to register this rock art in higher detail than before. During our investigation we have registered 7 rock art sites with a total of 1450 paintings, a few of them impossible to appreciate with the naked eye. The digital revolution has made a great contribution to the knowledge of past societies, providing powerful tools for analysis and recording findings from archaeological sites. Without these tools, many pieces of information would be lost forever.

Tracing the Lines: Scottish Grooved Ware Trajectories Beyond Orkney

Mike Copper (Bradford University) M.Copper1@bradford.ac.uk

Following recent work as part of the project The Times of Their Lives on the chronology of Neolithic developments in Orkney, the Historic Environment Scotland-funded project Tracing the Lines: Uncovering Grooved Ware Trajectories in Neolithic Scotland, based at the

University of Bradford, recently undertook a major review of all existing dates relating to Scottish Grooved Ware pottery beyond Orkney alongside the commissioning of a number of targeted new dates on organic residues. These dates were subsequently refined through Bayesian modelling at the Scottish Universities Environmental Research Centre, producing a series or site- and style-specific models. The resultant picture casts new light on the nature and timing of the adoption, development and ultimate demise of this important ceramic style in Scotland beyond Orkney. This paper will present the key findings of the project and will discuss the significance of the refined dating of northern Grooved Ware for our understanding of social change in Britain and Ireland throughout the 3rd millennium BC.

Flakes, fragments and tools: the use and deposition of volcanic tuff in the north-west of Britain.

Antony Dickson (Oxford Archaeology North) antony.dickson@oxfordarchaeology.com

Recent excavations, by Oxford Archaeology North, on the Skippool to Windy Harbour relief road, near Blackpool, Lancashire, recovered several fragments of ground and polished stone axes. They were predominantly made from volcanic tuff and most likely derived from the axe production sites in the central Lake District fells. The fragments were recovered from several different depositional contexts, including settlements and natural places, associated with early Neolithic occupation.

The main aim of this presentation is to discuss the condition and depositional context of the fragments within a wider research framework covering the north-west of Britain. In order to do this the presentation will consider the use and chronology of volcanic tuff, outline depositional practices at the Skippool/Windy Harbour sites and consider them alongside further evidence relating to similar activity from across the wider region. Finally, the research potential of the material from the excavations will be considered in relation to how this might benefit an understanding of the distribution and deposition of complete and fragmented tuff axe-blades and other implements.

Knock, knock… "anybody here??" Population and environment ~6100 cal bp: who and what did the first farmers encounter when they first arrived in Pembrokeshire?

Mike Efstathiou (Independent Researcher) michael.efstathiou.19@alumni.ucl.ac.uk

This presentation is based on research carried out for a recent Masters Dissertation that originally set out to describe Pembrokeshire around 6100 cal BP when, it is generally believed, Neolithic farming practices arrived in the area.

Despite steadily rising sea-levels and an initially chaotic climate following the retreat of the glaciers, Mesolithic hunter-gatherer-fishers appear to show a certain tenacity and resilience in occupying the county for five thousand years, but their numbers may have become unsustainable by the time the Neolithic "package" arrived. Indeed, Summed Probability Distribution and Kernel Density Estimate statistical analyses of 154 radiocarbon-dated samples from across Wales and the Borders show that Mesolithic activity in Pembrokeshire collapsed on two occasions following severe climatic deteriorations: between ~9.4-8.4 cal BP

and between ~7800-6800 cal BP. However, the abrupt cold event of ~8.2 kya appears only to have temporarily restricted and delayed the steady growth that is shown after ~8.4 cal BP both in the local vegetation and in the radiocarbon activity left by the hunter-gatherers of Pembrokeshire.

The Neolithic arrivals may have encountered, therefore, a sparsely populated landscape - with activity concentrated mainly along the coast, river valleys and in the intertidal channels, and with occasional hunting locations in the uplands. Woodland clearances in the interior may have been initially largely unopposed by such a small number of indigenous inhabitants. The nature of the woodland itself is subject to intense debate.

The fact that the Mesolithic genome also does not appear to contribute extensively to the aDNA data of the generations that followed might indicate either total absorption into the farming population or an extinction event in the local hunter-gatherer-fishers.

A brief overview of the limitations of statistical analyses and proposed future research will also be offered.

Seeing is believing...and how do we believe what we see?

Angela Gannon (Historic Environment Scotland) angela.gannon@hes.scot

This paper will promote an understanding of landscape archaeology and how we approach its recording through prospection, observation and interpretation. It will consider different scales and methodologies and the part they play, from traditional plane table survey to GPS and from aerial photographic transcription to laser scanning and lidar, above all reminding us of the needs and benefits of an integrated research approach. The recent discoveries of a two new cursus monuments in Scotland will provide case studies for exploring the application of these techniques and how they inform our analysis of features, their relationships and their classifications. And by looking more widely, at regional and national level, distribution patterns will be presented through the GIS to challenge our expectations of the archaeological record. Ultimately while experience can guide us, landscape survey has to be seen as an iterative process and one that can, and should, reference traditional techniques, continually review and question the nature of the evidence and at the same time welcome new approaches for the insights they offer.

Proto-henges and mortuary circles: a new chronology for Flagstones and some implications for the middle Neolithic

Susan Greaney (Cardiff University) and **Peter Marshall** (Historic England)
GreaneySE@cardiff.ac.uk

The period 3200–2900 BC was an important time of change in the middle Neolithic across southern Britain, with the initial adoption of Grooved Ware pottery, and the development of a distinct funerary tradition focused on cremation as the preferred (although not exclusive) mortuary practice. Large monuments were infrequently constructed, compared to the preceding and following parts of the Neolithic, and those that were built were almost all

circular monuments of various sizes, closely associated with the deposition of the dead. We present a revised chronology for the construction and funerary use of one of these monuments, Flagstones enclosure in Dorchester, Dorset. The results raise intriguing questions about the development of such proto-henges, the role of these monuments within the development of monument complexes and the relationship between large proto-henges and small circular or penannular cremation cemeteries. Some preliminary conclusions will be presented with the intention of stimulating discussion, to help inform this work in progress.

First Forays – using 2D and 3D modelling to recover perceptions of the Neolithic world in SW Britain.

Gail Higginbottom (Instituto de Ciencias del Patrimonio (Incipit), Consejo Superior de Investigaciones Científicas Dirección (CSIC)) gail.higginbottom@incipit.csic.es

It is a rare study that systematically analyses the entire topographic landscape pattern surrounding all monuments of a certain class within or across regions to determine the architectural and social systems they might share (e.g. Cummings and Whittle 2004 - Wales), it is rarer still for such projects in Europe to include an astronomical perspective (Higginbottom et al 2001, 2015; Higginbottom 2020 works in Scotland, Higginbottom et al work in Galicia). This current project chooses to expand Cummings and Whittles' revealing work on the tombs of Wales, through the consideration of the use of 2D/3D GIS and immersion technologies. In these ways, it hopes to further uncover the considerations of those people who created the megalithic monuments in the Neolithic and ultimately determine more clearly how these people perceived their World. This approach is seen as part of the overall methodology of 'building an Archaeology of Perception' (Criado-Boado, F; and Villoch-Vázquez, V. (2000). Like this quoted work, this pilot project is based on the systematic analysis of the visual features of the land- and skyscapes to allow us to recognize certain regularities that nominate these megaliths as part of a shared world or community, as well as individual visual locational characteristics. This presentation reveals some of the preliminary results on Welsh Tombs that are part of the Marie Skłodowska-Curie project: SHoW - Shared Worlds: revealing prehistoric shared worlds along Europe´s Atlantic Façade.

A taphonomic approach to Neolithic mortuary treatment in the caves of southwest Britain

Eirini Konstantinidi (Cardiff University) KonstantinidiE1@cardiff.ac.uk

There are a range of burial practices in the Neolithic. This research examines burials in caves, with direct evidence of Neolithic activity, focusing on twenty sites in Wales and one in North Somerset. This project employs an integrated taphonomic approach, combining macroscopic analysis of bone surface preservation and microscopic analysis of bone microstructure (histology). The provision of new dating evidence from ten of the sites examined in Wales will also maximise the interpretative resolution of the project. By undertaking traditional and novel osteological analysis this research will examine pre-and post-depositional treatment of the deceased and the means by which bones became disarticulated. Current research has progressed our understanding of burial practices in subterranean environments, however, a substantial corpus of funerary remains of prehistoric date, with many dating to the Neolithic, have not been subject to holistic study.

Macroscopic taphonomic analysis (visual osteological examination of surface modifications of human remains) provides information on the degree and duration of exposure of the

remains, the nature of manipulation and/or disturbance of the bones and the agents of these modifications impacted on the bone. In addition, microscopic analysis (thin section microscopy under transmitted light microscopy to assess the degree and nature of microstructural bioerosion) provides insight into early post-mortem processes and reveals the rate and nature of soft tissue decay.

This presentation outlines initial findings for the taphonomic analysis on sites across Wales. Burial patterns and practices revealed from analysis of disarticulated remains will be presented, including some unusual case studies, and future plans for analysis described.

A Neolithic Universe

Jon Morris (Independent Researcher) jonathanmorris@sphericalsolar.co.uk

This is an expanded version of a presentation given at The Institution of Civil Engineers in March 2019. The research uses the standard approach of identifying those structural features which are unusual or unique within any given existing structure. That method then demonstrates a most probable intended purpose if all the unusual features correspond to the design requirements needed for that particular purpose. This type of evaluation applies to utilitarian structures rather than follies or 'ritual' projects.

The presentation's primary aim is to demonstrate one reasonable alternative to the view that Stonehenge's design was primarily intended to be a ritual or religious structure. The alternative described is a structure that would be intended to be a geocentric description of the Cosmos: an architecture for teaching, intended to be used and viewed rather than used to look at heavenly objects. The type of early research that would generate such a rational geocentric philosophy are suggested to be the result of rational inquiry (which such a structure would then demonstrate). The project shows a potential unifying purpose for the majority of unique features, and the location of those features and other objects, found within Stonehenge's construction and its immediate grounds. The ideal geographical locations at which to undertake early inquiries into the nature of the universe are also shown to have monuments which have the appearance of being constructed to suit each task of inquiry required by the hypothesis. In doing so, the extended hypothesis also identifies potential uses for a number of these other Neolithic structures (approximately 200 such structures). The extended form of the hypothesis is also used to identify why and where materials used to build this type of structure would be most likely to be sourced. This includes some materials which are as yet unprovenanced.

An early Neolithic saltern at street house, north East Yorkshire

Stephen Sherlock (Independent Researcher) stephen.sherlock2009@hotmail.com

This paper presents the first known evidence for the manufacture of salt in Britain at the beginning of the Neolithic period, c. 3,800BC, from excavations at Street House, pre-dating previous evidence by 2,300+ years. The paper presents the context of the discovery with supporting archaeological and artefactual evidence. A sequence for manufacturing the product is proposed, citing continental parallels. Salt would be a valuable resource at this time and the people who controlled the production and distribution 6,000 years ago would

have great power and wealth. The use of salt is discussed in terms of preserving, flavouring and adapting recipes. The exchange mechanisms for marketing and distribution should also be considered!

Surplus or stress? Investigating the drivers of passage tomb construction in the Irish Sea Zone

Jessica Smyth (University College Dublin) jessica.smyth@ucd.ie and colleagues

The 'Passage Tomb People' project (PTP) aims to identify the social drivers of passage tomb construction in the Irish Sea region. The connectedness of passage tombs in these areas has long been recognised but to date there has been little integrated research on the societies that built them, due in part to the challenging nature of contemporary settlement evidence and dynamic depositional environments of the tombs themselves. The PTP team is addressing this via programmes of new osteological analysis, in addition to molecular and multi-isotope analyses on ~500 pottery sherds and ~450 human and animal teeth/bone and reference vegetation from the archives of upwards of 20 sites across Ireland, Orkney and north Wales. Weathering a perfect storm of Covid-19 and Brexit, sample collection and analysis is ongoing, but our ultimate aim is the generation of large, integrated datasets to more fully probe whether passage tombs are responses to economic stress or the result of surplus and increasing social competition in the Neolithic.

Northern England - continuing neglect

Emma Watson (Durham University) e.e.watson@durham.ac.uk and emma@dbra.co.uk

This presentation will provide the results of a new direction in research through a quantitative approach towards archaeological interest in the prehistoric monuments and landscapes of northern England. Despite some of the earliest dates for Neolithic monuments in England, this analysis details the current disparity between Neolithic and Early Bronze Age (N/EBA) monument distribution and the level and intensity of archaeological research into these landscapes of northern England, as compared with those elsewhere in Britain and further afield.

The dataset was compiled to detail the current numbers of N/EBA monuments within England, their level of preservation and scheduling. Secondly, this baseline data was compared to the current situation within England, to ascertain whether there is an actual or perceived disparity between the level of interest towards Neolithic and Early Bronze Age monuments throughout England, or whether these results reflect the proportion of monuments within each area.

The proposal will emphasise, through graphs and charts, the current situation in England vis-à-vis the imbalance in research within each region as compared with its N/EBA monument density. It will consider current-day funding, with an analytical quantification of interest in these prehistoric monuments, through an assessment of recent developer-funded and research-based archaeological work using the national forums of REF2014, ADS, COPAC, BAR, PPS and Antiquity. It will also provide a comparison between the current state of preservation of northern England's extant megalithic and non-megalithic monuments and those within other regions and explore the distinctiveness and individual importance of these N/EBA monuments and the associated wider landscapes of this region. This will highlight

research agendas for the future and, despite the in-built potentials and biases of any dataset, these sources can now be drawn upon to provide current information about the Neolithic and Early Bronze Age sites, monuments and landscapes of northern England and elsewhere.

An 'Everglades-like' landscape? Human-environment interactions within the riverscapes and wetlands of the Humberhead Levels, UK

Nicki J. Whitehouse (University of Glasgow), **Nika Shilobod, Henry Chapman, M. Jane Bunting, Kim Davies, Ben Gearey, Michelle Farrell and Phil Barratt** Nicki.Whitehouse@glasgow.ac.uk

Humans have long been attracted to the range of resources within river and wetland ecosystems, with a wide range of settlement and economic activities occurring around the wetland-dryland interface. We explore changing wetland-dryland dynamics across inter-connected river-mere-wetlands and look at how these places were used and transformed over time. Our focus is the Humberhead Levels, UK, (North Lincolnshire and South Yorkshire), just south of the Humber Estuary, where there has been a long history of palaeoenvironmental and archaeological study. Today the land cover is mostly intensive agriculture, but Lidar, historical maps, accounts, and the sediments underlying the fields tell a different story, showing a landscape of inter-connected rivers, meres and wetlands, and human settlement and activity clustered on islands of higher ground.

An extensive archaeological database of over 5000 data points has enabled us to infer the nature and focus of human activity and land use, whilst pollen records allow us to reconstruct the land cover history of key archaeological periods, highlighting differing ways in which these riverscapes and wetlands were used over time. Selected land cover reconstructions using the Multiple Scenarios Approach (MSA) of the earlier prehistoric time slices, focusing on the later Mesolithic and Neolithic, together with associated archaeological data are presented, to highlight the interplay between land use and land cover over time and how these complement each other. By reconstructing the temporal palaeogeography and dynamics of the wildscape of this region it is possible to better understand the complex patterns of human activity and land use change within these wetlands, demonstrating the importance of this region for resources and its wider connectivity.

Investigating Early Neolithic ceramics and diet in Britain through stable carbon isotope analysis and compound-specific radiocarbon dating of absorbed lipid residues in pottery.

Isabel Wiltshire (University of Bristol) iw12499@bristol.ac.uk

There remains uncertainty surrounding the origins, timing and spread of early Neolithic pottery in Britain. Bayesian modelling of radiocarbon dates associated with Early Neolithic pottery by Whittle, Healy and Bayliss (Gathering Time, 2011), Griffiths (PhD thesis, 2011) and Barclay and colleagues (Historic England, 2021) have shown that the accepted narrative that widespread Carinated Bowl gives way to more developed, regional styles, does not always hold true. They also reveal how these refined chronologies can provide a more accurate and nuanced understanding of ceramic development within the context of the development and spread of Neolithic practices more broadly.

Recent methodological advances from Casanova and colleagues (Nature, 2020) have enabled the radiocarbon dating of individual fatty acids surviving from foodstuffs prepared in vessels that become absorbed and protected in the fabric of the pot. This is an exciting opportunity, which allows for the direct dating of the actual use of the pottery itself, as well as opening up the possibility to date sites where other organic material such as bone or seeds may be too poorly-preserved, or non-existent. In addition, this method involves the extraction and characterisation of lipid residues from a large assemblage of pottery in order to select sherds for dating, and therefore provides a substantial new body of dietary information, with some residues directly associated with a radiocarbon date.

My PhD research employs this new methodology to characterise and radiocarbon date lipids extracted from Early Neolithic pottery. Thus far, over 500 sherds from almost 40 sites (including Yabsley Street, Dyffryn Ardudwy, and Little Waltham) have been sampled from England, Wales, and Scotland. This paper will present a summary of my results to date, including the dietary information obtained from the organic residue analysis of almost 300 sherds, as well as the preliminary radiocarbon dates from two sites.