



## CONFERENCE PROGRAMME

### WELCOME SPEECH

10:00 - 10:10 — **Ellen O'Carroll**

(Chair of Environmental Archaeology, Ireland and Institute of Archaeologists of Ireland)

### LIGHTNING TALKS

10:10 - 10:15 — **Nikolah Gilligan**

(Independent Archaeobotanist and Archaeological Site Director)

*I heard it on the grapevine*

Grape pips dating to the early medieval period are found very rarely in Irish archaeobotanical assemblages. This short talk will outline the only three grape pips which have been found in securely dated early medieval features to date. The relevant contexts and sites will also be discussed. The talk will provide suggestions as to how the grapes may have been introduced into the sites and how they can be interpreted. Are they the result of viticulture which was once carried out here during a warmer period in Ireland's history or are they associated with more complex political and economic factors?

10:15 - 10:20 — **Marc Morris**

(PhD candidate, University College Dublin)

*Cugghi l'acqua quando chiovi: Ancient Sustainability and Adaptation in a Water-Poor Landscape*

The Salento peninsula (the “heel” of Italy's “boot”) has been described as a “water-shaped landscape without rivers” and “rather lacking in water” for its unique karstic geology yet lack of extended drainage catchments. And yet, human settlements were established, most famously among them the Messapian culture, featuring a number of major urban centers with megalithic fortifications, and according to ancient sources, able to raise up armies of warriors to fight against, and at times for, the Greeks of Taras and elsewhere. The question here remains: in a land without rivers, how can a civilization establish itself and develop to engage in an increasingly connected Mediterranean world? How were the essential water needs of society, from those imposed by humans (e.g. hydration, cooking, washing, craft), and by agriculture and animal husbandry, met? In other words, how was the Messapian civilization sustainable for its basic existence? This paper discusses these questions, considering the estimated needs of ancient communities, the hydrogeological nature of the Salento peninsula, and hypothesizing adaptive cultural practices with regards to the gathering and storing of water. Finally, the paper examines how relative water scarcity may have had an impact on ancient cooking practices, by drawing on archaeological evidence and ethnographic parallels.

## 15 MINUTE TALKS

10:20 – 10:35 **Charlotte Molloy**

(First Harvests Project, University College Dublin)

*The ‘First Harvests’ project: untangling climate, chronology and cereal cultivation in Later Neolithic Ireland 3600-2500 BC*

Previous work on agriculture in Neolithic Ireland has suggested that evidence for cereal farming decreases dramatically between the Middle-Neolithic (c. 3600 BC) and the Bronze Age. Climactic fluctuations in the period have been suggested as a possible cause but hitherto this has not been extensively explored. First Harvests is an interdisciplinary project involving parallel but integrated strands of investigation, focusing on archaeobotany and palaeoclimatology, that will

provide new baseline data for this crucial period of Ireland's earliest farming story. The overall aim of First Harvests is to understand the interaction between changing climates and farming strategies in prehistoric Ireland. It will fill a crucial gap in knowledge about the development of cereal agriculture in Ireland in the centuries after its first introduction in the early fourth millennium BC. The project has three main objectives: 1) to quantify existing archaeobotanical records c.3600-2500 BC and investigate how these records are generated under current archaeological practice; 2) to investigate the relative roles of different cereal crops and cultivation methods c. 3600-2500 BC, and 3) to interrogate the connection between these archaeobotanical records and climate proxy records. This presentation will introduce this project and its methodology.

**10:35 – 10:50 Penny Johnston**

(FOODSEC Project, University College Dublin)

*Burning down the house. Evidence for grain storage at Irish domestic settlements from c. 1600 to 800 BC*

Ideas of storage and surplus permeate discussions of the European Bronze and Iron Ages, tracing the emergence of complex, stratified societies where non-food producing elites and specialist craft workers appropriated surplus staple resources (such as cereals). The palaeo-environmental record for the Irish Bronze Age is characterised by periods of increased agricultural activity, which in turn suggest increased production and storage. Over time, this would have led to the accumulation of a surplus. However, apart from the analysis of Bronze Age bog butter, Irish narratives about storage in this period are under-developed; it is either assumed or ignored. This paper will focus on one aspect of the storage record, the large quantities of grain within domestic settlements in the Middle and Late Bronze Ages. Drawing on legacy data from Irish excavation reports, we will argue that the storage evidence points to household-level, private storage in the Middle Bronze Age, with more public displays of surplus evident in the Late Bronze Age. This work was carried out as part of the FOODSEC (Food Security in Bronze Age Ireland) project, funded under the 2022–2024 Irish Research Council COALESCE Scheme (strand 1L INSTAR+; Project ID: COALESCE/2022/1623).

**10:50 – 11:05 – Robert Power**

(DietEvo Project, University College Dublin)

*Dental calculus microbotanical evidence of early agricultural diets*

Research has revealed that understanding cereal use is key to understanding the economies of Neolithic Ireland. Carpological studies of carbonised grain have shown the importance of emmer wheat, with lesser amounts of hulled and naked barley and flax. Chronological assessment has shown the prevalence of cereal remains from the Early Neolithic excavations, but little crop remains from the Middle Neolithic or Late Neolithic sites. Although these patterns are complicated by the dearth of settlement sites as opposed to burial sites, they seem to reflect profound changes in Neolithic societies during this time. Here, we report novel evidence of Neolithic plant use using microbotanical remains, namely phytoliths and starches, as well as other particles trapped in dental calculus. These remains broaden our datasets and help correct record distortion created by settlement versus burial sites.

11:05 – 11:20 – **Q & A**

**COFFEE BREAK**

**15 MINUTE TALKS**

11:50 – 12:05 – **Eva Kourela**

(PhD candidate, University College Dublin)

*Theory before practice: Building on theoretical frameworks to inform the future*

Insects and humans have shared and continue to share the same environment until today. However, our views towards insects and other arthropods have changed tremendously, and often with dramatic consequences for nature. In a fast-paced environment as the one we are living in, we have successfully alienated ourselves completely from nature. In return, this impacts our capability to understand how significant these tiny creatures are for our sustainability but also for theirs. This paper will set the theoretical basis and will be the beginning of building the methodology for this paper as a small part of

my current research. The focus of this paper will be on human-insect interactions and how “natural” environments are affected by it. Finally, discussion will be focused on the niche specialisation of insects and other arthropods and existing biases that may affect their presence.

**12:05 – 12:20 – Marie-Therese Barrett**

(Dendrochronological researcher, Irish Archaeology Consultancy Ltd, QUB)

*Reconstructing Drumclay's Past: The Role of Tree-Ring Analysis*

This presentation is based on the results of a doctoral thesis on the chronology of Drumclay, Co. Fermanagh, using tree-ring analysis. This research achieved an absolute chronology by combining different forms of chronological data including tree-ring analysis, radiocarbon dating, wiggle-match modelling and the identification of a <sup>14</sup>C spike. The chronology provided not just a construction date for the site but has untangled the stratigraphic record revealing a narrative of construction and occupation on a year-to-year basis. This presentation will outline some of the results of this multifaceted approach to chronology and how it has revealed the pace at which the site developed. It will also examine the application of a precision chronology alongside a reconstructed environmental model.

**12:20 – 12:35 – Kevin Daly**

(Lecturer/Assistant Professor at UCD's School of Agriculture and Food Science, Conway and Ad Astra fellow)

*A Healthy Herd: inbreeding and pathogens in ancient livestock remains*

For approximately 10,000 years, the livelihood of pastoralist communities has been intertwined with the welfare and health status of their herds. Genomics, applied to archaeological faunal remains, offers a novel window into the welfare of domestic animal populations in the past. This presentation will describe two genetic approaches - inbreeding analysis and the recovery of pathogen genomes - as applied to ancient small ruminants, sheep and goat. I will outline how patterns of inbreeding varied throughout time in Western Eurasia, and how this might have affected the robustness of livestock populations in the past. The presentation will also detail how pathogen genomes recovered from animal

remains can inform on host adaptation, zoonosis evolution, and the possible interplay with host livestock populations.

**12:35 – 12:50 – Bruce Sutton**

(PhD candidate, University of Highlands and Islands, Rubicon Archaeology Group Ltd)

*Fuel for Thought: Irish Burnt Mounds as an Underappreciated Anthracological Resource*

Burnt mounds represent the most frequently excavated archaeological site type in Ireland and are often regarded as a ubiquitous and uniform class of monument with limited interpretive value. Nonetheless, they routinely produce substantial assemblages of charcoal, offering a largely untapped paleoenvironmental archive. Detailed anthracological analysis from two sites has revealed significant inter-site variability, including marked differences in the representation and selection of specific woody taxa. These preliminary results underscore the potential of burnt mound charcoal assemblages to inform reconstructions of prehistoric woodland composition and resource exploitation strategies, challenging assumptions of their redundancy as archaeologically important monuments.

**12:50 – 13:05 – Q & A**

**LUNCH BREAK**

**LIGHTNING TALKS**

**14:05 – 14:10 – Roisin O'Droma**

(Environmental Specialist, Irish Archaeology Consultancy Ltd and Carlow College.)

*Fields of Evidence: Using Archaeobotanical and Historical Documentary Sources to Understand Agriculture in Medieval Dublin*

This talk will present a work-in-progress thesis that investigates medieval agriculture in the region surrounding Dublin through the integration of archaeobotanical and historical documentary sources. While historical documents provide valuable insight into landholding patterns, taxation, and agricultural practices, they are often uneven in coverage and reflect administrative priorities. By contrast, archaeobotanical remains offer direct evidence of crops grown and environmental conditions but are limited by preservation and sampling constraints. By analysing plant remains from three case study sites—Swords, Dunshaughlin, and Johnstown/Naas—and comparing these to contemporary written records, this project explores the degree to which these data sources align or diverge. This interdisciplinary approach should both improve site-level interpretations and also contribute to broader discussions about the role of combining environmental and historical evidence in reconstructing past economies.

**14:10 – 14:15 – Niamh Millward**

(PhD candidate, University College Dublin and Irish Archaeological Consultancy Ltd.)

*The Risks of Climate Change to Irish Heritage*

Ireland has a wealth of palaeoenvironmental heritage in the form of the various peatlands that can be found across the country. These peatlands often contain materials (such as pollen, insect remains and plant macrofossils) that can be used to reconstruct past landscapes, environments and human activity. However, these deposits are at risk from climate change. Specifically, coastal peat deposits are at risk from storms, erosion and rises in sea level. These deposits can reveal information about previously terrestrial environments, but there is very little focus on these deposits in current archaeological research. The study of coastal peat deposits can also be used to enhance current studies regarding the erosion of peatlands in Ireland and the effects this can have on climate change.

**15 MINUTE TALKS**

**14:15 – 14:30 – Caitríona Moore**

(IPeAAT Project, University College Cork and Archaeology Built Heritage)

### *Irish Peatland Archaeology Across Time*

The archaeology of Ireland's industrial peatlands, comprising sites and artefacts exposed, impacted and often destroyed by drainage and peat extraction, is perhaps some of the most fragmented in the country. Nonetheless, almost 40 years of survey, excavation and palaeoenvironmental work have generated an immense archive of data and a unique resource of knowledge on the distribution and character of peatland archaeology on a national scale. With the end of industrial cutting, the Irish Peatland Archaeology Across Time Project (IPeAAT; funded by the IRC COALESCE INSTAR+ scheme), has compiled and assessed these datasets to gain a better understanding of the timing, nature and purpose of human activity in Ireland's peatlands, in relation to environmental and climatic changes. This paper outlines the approaches and key results of the project, including the construction of a relational national database incorporating information drawn from detailed investigation of archaeological excavations and associated data including palaeoenvironmental analyses and chronology. The application of spatial and chronological modelling to this national database has allowed for the identification and analysis of key patterns of human activity in a variety of peatland environments over time.

**14:30 – 14:45 – Don O'Meara**

(Archaeologist, Historic England)

### *Hibernia to Cumbria – North Irish Sea Agricultural Exchange in the Medieval Period*

The trade of food products and agricultural practices has been an important part of environmental studies in Ireland for many decades. From the first agricultural products of the earliest Neolithic, to exotic foods and new agricultural processes during the Iron Age/Roman periods and into the medieval period, the study of these remains connects Ireland to distant European trading networks. This flow was not unidirectional and this presentation uses two case studies currently being studied from Cumbria, North-West England to consider the role of agriculture in Ireland in supporting medieval communities in North-West England. The first will use direct historical and archaeological evidence to

consider the importance of Irish agricultural products to the Cistercian monastery of Holm Cultram in the 13<sup>th</sup> century. The second will present evidence from excavations of a possible Hiberno-Scandinavian homestead in Cumbria to consider how Irish agricultural patterns may have been introduced to some regions of Northern England during the early medieval period. These case studies ask us to consider how this region of England, comparatively cut-off from surrounding regions of England and Scotland may have looked west as part of the development of economic systems and processes to support its communities during the medieval period.

**14:45 – 15:00 – Meriel McClatchie**

(Associate Professor, CROPREVIVE project, University College Dublin)

*CROPREVIVE: how past farming systems can help build a more sustainable future*

The CROPREVIVE project is examining the extensive archaeological evidence for farming in ancient Ireland and merging findings with data from modern farming systems to help plan for the future. The project focuses on three crops that were popular in the past, but have fallen from favour in Ireland: emmer wheat, rye and peas. These crops have great potential because they are nutrient-dense, suited to European climates and environments, and viable for sustainable production. The project is determining how these crops became underutilised, and how they can be revived. The CROPREVIVE project is funded by the Irish Research Council Coalesce Scheme. For further information, see the project website, <https://www.ucd.ie/archaeology/research/croprevive/>.

**15:00 – 15:15 – Q & A**

**KEYNOTE SPEAKER**

**15:15 -15:55 – Francis Ludlow**

(Associate Professor of Medieval Environmental History, Trinity College Dublin)

15:55 – 16:10 – Q & A

END OF CONFERENCE

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