HOW TO READ THE ABSTRACT BOOK

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Author's affiliation is stated in brackets following the author's name; where authors share the same affiliation, it is only stated once.

Index of Authors includes all session organisers and only the main authors of contributions.

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research in ways that are accessible, engaging and meaningful, and lead (and mentor) by example: otherwise they risk reproducing the structural inequalities inherent in the academy. By identifying key areas for improvement in the practice of environmental archaeology and suggesting ways to address perceived shortcomings, I will attempt to establish a research program focusing on human-environmental interactions on the island of Newfoundland in Canada. I will do this by presenting a pilot project aiming to examine the legacies of cultural and ecological interactions at the UNESCO World Heritage Site of L’Anse aux Meadows to be critically appraised by the audience.

6 INTERDISCIPLINARITY. I CAN’T BELIEVE IT’S NOT BETTER!
Abstract author(s): Nilsson Stutz, Liv (Linnaeus University)
Abstract format: Oral
Archaeology has a long history with interdisciplinarity. Through collaborations across the board, archaeology has been a frequent borrowing place for theories and methods from other disciplines, and the development of these relationships can be read as a history of the trends shaping the field throughout the 20th and 21st centuries. It can be said that archaeology, to a large extent has become defined by its partners, not by its own core.

In recent years, archaeology has rekindled its relationship with the natural sciences, following a general trend of a desire for hard facts, abandoning the Humanities said to be “in crisis” (as a backlash against postmodernism) and also following the reward system of the academy and suggesting that natural sciences offer better grant prospects and heavier impact factors. This kind of interdisciplinarity is, without a doubt, valuable, but it also has its limitations, in particular in how it affects the research process and the research questions by narrowing them down to fit the natural science model. Another problem with the dominating interdisciplinary models in archaeology is that they are limited to a dyadic relationship which misses out on the possibilities of really engaging with a broad range of disciplinary perspectives.

This paper takes a critical look at the mechanics of these relationships and how they affect the field of archaeology. It makes the case for a more radical way for archaeology to embrace a broader set of disciplines going forward, in particular by deepening its relationship to the social sciences, and advocates for the importance of interdisciplinary literacy.

7 LET’S TALK ABOUT IT. THE IMPORTANCE OF COMMUNICATION AND TRANSLATION IN INTERDISCIPLINARY COOPERATION
Abstract author(s): van Helden, Daniël (University of Leicester)
Abstract format: Oral
While boundaries between disciplines are indeed historical relics, and therefore not a natural given, to call them arbitrary is perhaps an overstatement. In archaeology, we are used to the idea that although human behaviour is not law-governed in the same way that natural processes are, neither are the results of this behaviour random. Thus, while many outcomes are possible from a historical situation, they are not equally probable. I would argue that, even though the exact position of disciplinary boundary is arbitrary, coarse divisions do exist with the sciences (understood indistinctly to contain the humanities as well as the natural sciences).

It is these underlying divisions that really characterise the challenge of interdisciplinary cooperation. People communicate and think in different ways in different fields. This should not be overstated, it does not reflect some Kuhnian incomensurability, but through training people are ‘disciplined’ in ways that are specific to their chosen field. This divergent disciplining is like speaking different languages; it is not impossible to communicate, but it takes effort. Most problems with interdisciplinarity reduce to such communication difficulties; from misunderstandings within projects to different ways of communicating results (i.e. problems with publishing in outlets that are judged by disciplinary codes).

Fundamentally, the only solution to a communications problem is more communication. Using real-life examples, I will argue that there is a crucial role for ‘translators’ in truly successful interdisciplinary work. It is such translators that, through speaking multiple disciplinary languages, enable bridging the, very real, communication gaps. Without them, interdisciplinarity is often just juxtaposition of different disciplinary results without much connection between them. Interdisciplinarity has real potential, but it requires explicit, dedicated, attention to communication to be more than a fashionable buzzword.

8 METHODOLOGICAL ANARCHISM AGAINST INTERDISCIPLINARITY: BREAKING DOWN METHODOLOGICAL WALLS
Abstract author(s): Ribiero, Artur (Christian-Albrechts-Universitat)
Abstract format: Oral
It seems that any archaeological project that wants to be funded and noticed by peers requires incorporating something called ‘interdisciplinary research’. A brief perusal through the titles and abstracts of the sessions at this EAA conference shows that around 45 to 50 of them contain the word ‘interdisciplinary’ or some other variation of this term. Yet, to paraphrase Alexandra Ion, one should ask: how interdisciplinary is interdisciplinarity?

This paper will argue two points: first, interdisciplinary research, as it is practiced in archaeology today, is detrimental to the progress of the discipline. Interdisciplinarity has simply become a buzzword that attracts funding by making archaeology more scientific by being more innovative, the chances of publishing in high-ranking journals is enabled, which in turn, guarantees future funding. Additionally, the methods of the human and cultural sciences are suppressed in interdisciplinary research – the objects of analysis traditionally studied by the human and cultural sciences are reduced to proxies or quantifiable metrics, which are then primarily used to reach consilience with the hypotheses established by the natural sciences.

Second, this paper will also argue that the use of natural science techniques does not provide a more accurate, objective, or factual perception of the past, as opposed to the human and cultural sciences, only a different form of knowledge. In what, short, what is needed in archaeology is not necessarily interdisciplinarity, but rather methodological anarchism. From a methodological anarchistic standpoint, what is valued is the information that can be obtained regardless of method or discipline. Additionally, methodological anarchism favours different forms of knowledge, not just knowledge of the same kind. Finally, methodological anarchism breaks down walls concerning what is conventionally or implicitly considered “high-quality” research, opening up the discipline to ideas and methods that have been ignored for far too long.

77 PLANTS MEET ARTIFACTS: DEVELOPING INTERDISCIPLINARY APPROACHES TO IDENTIFY PLANT PROCESSING AND USE IN ARCHAEOLOGY [ARCHAEOLOGY OF WILD PLANTS]
Theme: 5. Theories and methods in archaeology: interactions between disciplines
Organisers: Arranz Otaegi, Amaia (Dept. of Cross Cultural and Regional Studies, University of Copenhagen) - Cubas, Miriam (Dept. of History and Philosophy; Universidad de Alcalá) - Rosenberg, Danny (Zinman Institute of Archaeology, University of Haifa) - Rubí, José (Instituto Milà i Fontanals, Consejo Superior de Investigaciones Científicas)
Format: Regular session
Archaeologists have long searched for methods to identify the use and function of prehistoric artefacts. The increasing application of use-wear, molecular and experimental approaches to the study of pottery vessels, flint and ground stone tools have provided crucial new insights into prehistoric tool use. However, whereas analytical methods to identify animal-derived resources are relatively well established, direct evidence for plant processing, use and consumption continues to be largely “hidden” in the archaeological record.

The aim of the session is to bring together specialists on the study of different archaeological artefacts (e.g. pottery, ground stone and flint tools), archaeobotanists (plant macro- and microremains), biomolecular archaeologists (organic residue analyses) and researchers specialized on experimental archaeology to discuss current approaches to identify the preparation and use of plant resources in the past.

We encourage problem-based interdisciplinary case studies that combine multiple lines of evidence to solve a particular question or hypothesis. Presentations highlighting the potentials and limitations of the different methods in use will also be welcome, as well as those applying new techniques or material studies (e.g. charred food crusts). Research themes are open (e.g. food preparation, processing, raw materials...), and contributions from all periods and geographic regions are generally welcomed.

At the end of the session, we will organize a round table to discuss sampling and study protocols that allow multi and inter-disciplinary approaches to be implemented and guarantee the comparability of results between sites.

ABSTRACTS

1 STRIPPING GRAINS – AN EARLY CEREAL PROCESSING TECHNIQUE REVEALED THROUGH USE-WEAR ANALYSIS AND EXPERIMENTAL ARCHAEOLOGY
Abstract author(s): Groman-Yanoskis, Iris - Barshay, Katerina - Kropovicky, Maya (University of Haifa; Zinman Institute of Archaeology)
Abstract format: Oral
First sickle blades begin to appear on a regular basis in the Levant during the Late Epipaleolithic period ca. 15,000 BP. They are considered a Natufian innovation in the southern Levant, representing intensification in the exploitation of cereal resources. In a use-wear analysis conducted lately on sickle blades from several archaeological sites, a feature in the shape of transversal striations associated with the cereal use-wear polish was noticed and investigated. This feature appears on items from a Natufian context throughout the Pre-Pottery Neolithic period, indicating the use of the specific technique of stripping to remove the grains from the stems after the harvest. Experimentation replicating such an activity, applied to wild barley and domesticated emmer wheat explains the purpose and advantages of this technique. Using different types of sickles, equipped with different types of cutting blades, the stripping technique was found to be efficient for separating the grains from the stems and also acts as a threshing device for dehusking. We propose a new reconstruction of a processing sequence, characterizing the earliest stages of inventing cereal harvesting and processing technologies, before the age of threshing floors and tribulum. We present indicative microscopic traces and results of the experimental program, compared to some archaeological examples from the southern Levant.
WHAT’S IN THE COOKING POTS? - SEM AND LIPID ANALYSES ON FOODCRUSTS FROM THE EARLY NEOLITHIC IN THE NETHERLANDS

Abstract author(s): Kabuki-Martens, Lucy (BIAX Consult, Biological Archaeology & Environmental Reconstruction, Zaandam) - Demars, Odile (Groningen Institute of Archaeology, Groningen) - Lucquain, Alexandre (BioArch, Department of Archaeology, University of York)

Abstract format: Oral

This research aims to understand the use of pottery from one of the Early Neolithic Swifterbant Culture sites: S4 (4100-4000 cal BC), in the Netherlands by combining different methodological approaches to the study of charred foodcrusts and to pottery analysis. The broad-spectrum subsistence economy of the site included wild and domestic animals, aquatic food resources, local cereal cultivation, and the gathering of wild plants. Although the early pottery from this site has been extensively studied, its function and the extent of its use have remained the subject of an ongoing discussion.

In this study, pottery from this site was used as a case study to test the potential of different approaches to the study of the foodcrusts and to pottery analysis. The results from these three disciplines were joined together in our search for a better understanding of the use of the S4 pottery. The SEM (Scanning Electron Microscope) was used to study tiny fragments of cereal and other plant tissues that survived the processes of food preparation and cooking.Bulk stable isotope analysis of the foodcrust and the lipid residue analysis on the pottery were used to detect and differentiate specific biomarkers for ruminant, non-ruminant, aquatic and dairy food resources. The results from these three disciplines were joined together in our search for a better understanding of the use of the Swifterbant pottery. This is the first time in Dutch archaeology that these methods were combined and successfully applied to a series of examples from the Early Neolithic Swifterbant culture.

Therefore, in our research, three different disciplines, each with its own highly sensitive methodology, were combined to identify the use of the S4 pottery. The SEM (Scanning Electron Microscope) was used to study tiny fragments of cereal and other plant tissues that survived the processes of food preparation and cooking. Bulk stable isotope analysis of the foodcrust and the lipid residue analysis on the pottery were used to detect and differentiate specific biomarkers for ruminant, non-ruminant, aquatic and dairy food resources. The results from these three disciplines were joined together in our search for a better understanding of the use of the Swifterbant pottery. This is the first time in Dutch archaeology that these methods were combined and successfully applied to a series of examples from the Early Neolithic Swifterbant culture.

INTERDISCIPLINARY ANALYSES OF TUBER GATHERING, PROCESSING AND CONSUMPTION: EXPERIMENTAL ARCHAEOLOGY IN ACTION

Abstract author(s): Pedersen, Patrick - Arranz-Oteagui, Amaia - Jorgensen-Lindahl, Anna (Department of Cross-Cultural and Regional Studies, University of Copenhagen)

Abstract format: Oral

Ethnographic evidence shows that underground storage organs (USO) represent one of the most important plant-foods consumed by modern hunter-gatherers. At the early Natufian site of Shubayqa 1 (4.14-14.2 ka cal BP, northeastern Jordan), thousands of club-rush tubers (Belbisanthus glaucus) were identified in two fireplaces, indicating their recurrent roasting. To understand how these plants were gathered, processed and consumed, an interdisciplinary framework was designed where experiments with modern equivalents formed the basis. The work combined ethnographic data, taphonomic analyses of modern club-rush tubers, and use-wear analysis of the experimental groundstone and flint tools. To start, club-rush tubers were gathered by lake Burqah, the closest modern lake area to the site. The best season for tuber collection was evaluated, and different gathering methods tested. The tubers were peeled in multiple ways, by hand, using flint tools and by roasting. The clean tubers were subsequently processed using both mortars and grinding slabs, and the resulting plant products evaluated in terms of the size and shape of the particles. The tuber flour was mixed with wheat flour at different proportions and the dough cooked on the ashes of a firepane and on top of heated basalt stones. The results of these experiments allow us to evaluate some of the options for the gathering, processing and cooking of club-rush tubers in the past. The experimental plant remains as well as the lithics produced during the different experimental stages will be essential to interpret the archaeological remains found at Shubayqa 1.
that Neolithic people at Gobekli Tepe have produced standardized and efficient grinding tools, most of which have been used for the processing of cereals. Additional phytolith analysis confirms the massive presence of cereals at the site, filling the gap left by the weakly preserved charred macro-residues. The organization of work and food supply has always been a central question of research into Gobekli Tepe, as the construction and maintenance of the monumental architecture would have necessitated a considerable work force. Contextual analyses of the distribution of the elements of the grinding kit on site highlight a clear kin between plant food preparation and the rectangular buildings and indicate clear demarcations of working areas for food production on the terraces the structures lie on, surrounding the circular buildings.

14 APPROACH TO PLANT-CRAFTS TECHNIQUES FROM THE BASAL MAT IMPRINTS OF BRONZE AGE CERAMICS IN THE NORTHEAST OF IBERIAN PENINSULA

Abstract author(s): Piquet, Raquel - Bodganovic, Igor (Universitat Autonoma de Barcelona, Departament de Prehistòria) - Homs, Anna (Independent researcher) - Lopez-Bluth, Oriol (Universitat Autonoma de Barcelona, Departament de Prehistòria) - Palomo Pérez, Antoni (Museu d’Arqueologia de Catalunya) - Romero-Bragués, Susana - Taronquè, Eudokia (Universitat Autonoma de Barcelona, Departament de Prehistòria)

Abstract format: Oral

Prehistoric evidence of plant crafts is scarce in the Iberian Peninsula. The few sites that have provided samples of baskets are restricted to the Southeast of Iberia where dry conditions have favoured the conservation of plant-based implements as textiles, baskets, and ropes. In the Northeast, the environment is not appropriate for this type of the conservation and the examples are still rare, but it should be mentioned the well-known Early Neolithic site of La Draga (Banyoles) or bronze age contexts of the Cova dels Moros d’Altea (Altea) where fragments of baskets have been preserved. Indirect evidence of craft plant techniques are the imprints of mats and baskets in the base of ceramic pots. They appear in Northeast of Iberia in chronologies of Early Bronze age (circa 2000-1550 BC). Although these pots have been usually studied from the perspective of potter’s little attention has been paid with respect to their significance in terms of crafts technology. The objective of this paper is to study mats imprints to provide light on the evolution of plant crafts technology in Northeast Iberia. We combine 3D scanning and experimentation to identify the craft techniques of Cova Fonda (Salomó), Cova de Valldaura (Albinyana), Cova del Forcí i Dós de Balaguer and Bayans de la Mària (Capmany) where several pieces with basal mats imprints have been recovered. The imprints allow identifying coiling techniques and details of the production process of mats.

15 USE OF PLANTS BY THE FUNNEL BEAKER CULTURE COMMUNITIES IN POLAND

Abstract author(s): Sobolewski-Tabaka, Iwona - Renownz, Joanna (Institute of Archaeology and Ethnology of the Polish Academy of Sciences, Centre for Prehistoric and Medieval Studies, Poznan)

Abstract format: Oral

Plants played an extremely important role in the Funnel Beaker Culture (TRB). Apart from their primary value as a source of food, they were used in many different fields of life at TRB communities at that time. In this paper we present the findings from several archaeological sites of sedimentary type from Poland. We selected materials, each time precisely related to the archeological context, such as macroscopic plant remains, fragments of ceramic vessels and daub containing plant imprints, mineralized plant tissues chose from clay, and numerous charcoals. These sources were obtained primarily from economic pits of various purposes and the remains of residual buildings. Both stereoscopic and scanning electron microscopes were used to identify them. We try to indicate the compatibility of sources and methods used, especially in the case of reanalysis of archival materials.

In the paper, we discuss the importance of plants in the economy of the TRB community, especially in the context of their cultivation, storage, and trade. A particularly interesting was to learn the techniques of ceramic vessel production in the context of the recipe, admixture used, the use of plants, including fibrous species and wood, at various stages of construction of residential houses and accompanying connectivity, linking them with the calendar of economic activities, as well as a detailed case study indicating the use of plants for medicinal purposes.

We present new data, including the first identifications of some species for TRB culture from present-day Poland.

16. COMBINING USE-WEAR AND RESIDUE ANALYSES OF GRINDING STONES AND EXPERIMENTAL STUDIES TO DETERMINE PLANT USE AT EARLY NEOLITHIC GOBEKLI TEPE

Abstract author(s): Dietrich, Oliver - Dietrich, Laura (Deutsches Archäologisches Institut) - Meister, Julia (Julius-Maximilians-Universität Würzburg)

Abstract format: Poster

The well-known site of Gobekli Tepe (9.600-8.000 cal BC) consists of monumental round to oval buildings with richly decorated T-shaped pillars, erected in an earlier phase, and smaller rectangular buildings, built around them in a partially contemporaneous and later phase. Among the finds from the site, the number of tools related to food processing, including grinding slabs/bowls, handstones, pestles, and mortars, is striking. We analyzed more than 7000 artifacts. This high frequency is usual for contemporary sites in the region. Using an integrated approach of formal, experimental, and macro-/microscopical use-wear analyses we show that Neolithic people at Gobekli Tepe have produced standardized and efficient grinding tools, most of which have been used for the processing of cereals. Additional phytolith analysis confirms the massive presence of cereals at the site, filling the gap left by the weakly preserved charred macro-residues. The organization of work and food supply has always been a central question of research into Gobekli Tepe, as the construction and maintenance of the monumental architecture would have necessitated a considerable work force. Contextual analyses of the distribution of the elements of the grinding kit on site highlight a clear kin between plant food preparation and the rectangular buildings and indicate clear demarcations of working areas for food production on the terraces the structures lie on, surrounding the circular buildings.

82 COLLABORATIVE SYNTHESIS: THE EAA-SAA HUMAN MIGRATION PROJECTS

Theme: Sustainable archaeology and heritage in an unsustainable world

Organisers: Altschul, Jeff (Coalition for Archaeological Synthesis (CfAS) Foundation) - Richards, Julian (Archaeology Data Service, University of York) - Kintigh, Keith (Coalition for Archaeological Synthesis; Arizona State University)

Format: Regular session

In 2019, the European Association of Archaeologists (EAA) and the Society for American Archaeology (SAA) sponsored a Coalition for Archaeological Synthesis (CfAS) design workshop on human migration as understood from a long-term perspective. The workshop included 15 participants from seven countries, representing work on six continents, ranging from the Paleolithic to homeless migrants, with expertise that varied from anthropologists to ethnographers. The objective of the workshop was to develop proposals for collaborative-synthetic projects that focused on establishing the factors stimulating human migration, the conditions and processes implicated in the success of the incorporation of immigrant groups at their destination, and how these new understandings might inform contemporary public policy. Three project ideas emerged from the workshop: (1) climate migrants of the present, past, and future; (2) leveraging archaeology for migrations of the present (LAMP); and (3) long-term effects of past migrations on human security. In this session we will discuss the origins and outcomes of the workshop, update the status of each project and how EAA members can become involved. Presenters also will inform on the importance of using archaeology to understand contemporary migration with case studies from Europe and South America.

1 ABSTRACT 1

1. THE ORIGIN AND OUTCOME OF THE EAA-SAA DESIGN WORKSHOP ON HUMAN MIGRATION

Abstract author(s): Altschul, Jeff (SAA Foundation; Coalition for Archaeological Synthesis)

Abstract format: Oral

In 2019, the Coalition of Archaeological Synthesis (CfAS) held a design workshop on understanding human migration from a long-term perspective. The workshop, co-sponsored by the European Association of Archaeologists (EAA) and the Society for American Archaeology (SAA), grew out of a frustration that the public debate shaping migration policy was not informed by research into the deep-rooted social processes that affect migration. To change this dynamic, EAA and SAA turned to CfAS, which uses a model of collaborative synthesis that relies on face-to-face interaction by small, diverse groups of experts to provide evidence-based results that inform issues facing modern society. CfAS invited 15 participants, representing seven countries and research from six continents. Starting from the United Nations’ position that every person is entitled to human security, the participants outlined three conceptual projects for which archaeological data are essential (1) establishing global, historic variation in rates of migration at regional and community levels; (2) examining how the characteristics of past migrations affect different dimensions of human security; and (3) identifying the social conditions that make societies more vulnerable to climate-related migration. In this session, each of these projects will be presented in greater detail along with their current status. We also discuss what we have learned through this process and how it will shape the future direction of CfAS and the Center for Collaborative Synthesis in Archaeology. Finally, we will hear from the leadership of the SAA and EAA about the importance of synthetic research on issues of relevance to modern society.

2 ABSTRACT 2

2. CLIMATE MIGRANTS OF THE PAST, PRESENT, AND FUTURE

Abstract author(s): Aldenderfer, Mark (University of California, Merced) - Bird, Douglas - Douglas, Kristina (Pennsylvania State University) - Gauthier, Nicolas (University of Arizona) - Ingram, Scott (Colorado College) - Scafidi, Beth (Arizona State University)

Abstract format: Oral

The world’s Indigenous peoples are among those most dramatically affected by the increasingly rapid pace of global climate warming and many will become climate-related migrants, losing both their homelands and lifeways. Although contemporary social scientists have studied climate-related migration and its outcomes intensively, little consensus has been reached to define the most significant social and environmental factors that promote or constrain migration and that may have been responsible for creating conditions of vulnerability in the societies confronted by climate change. This situation has been worsened by a failure to consider the historical contexts of migrations and the ways in which past decisions have affected modern outcomes. Our project, one of the three collaborative synthetic projects that focused on establishing the factors stimulating human migration, the conditions and processes implicated in the success of the incorporation of immigrant groups at their destination, and how these new understandings might inform contemporary public policy. Three project ideas emerged from the workshop: (1) climate migrants of the present, past, and future; (2) leveraging archaeology for migrations of the present (LAMP); and (3) long-term effects of past migrations on human security. In this session we will discuss the origins and outcomes of the workshop, update the status of each project and how EAA members can become involved. Presenters also will inform on the importance of using archaeology to understand contemporary migration with case studies from Europe and South America.

Abstract format: Oral

In 2019, the Coalition of Archaeological Synthesis (CfAS) held a design workshop on understanding human migration from a long-term perspective. The workshop, co-sponsored by the European Association of Archaeologists (EAA) and the Society for American Archaeology (SAA), grew out of a frustration that the public debate shaping migration policy was not informed by research into the deep-rooted social processes that affect migration. To change this dynamic, EAA and SAA turned to CfAS, which uses a model of collaborative synthesis that relies on face-to-face interaction by small, diverse groups of experts to provide evidence-based results that inform issues facing modern society. CfAS invited 15 participants, representing seven countries and research from six continents. Starting from the United Nations’ position that every person is entitled to human security, the participants outlined three conceptual projects for which archaeological data are essential (1) establishing global, historic variation in rates of migration at regional and community levels; (2) examining how the characteristics of past migrations affect different dimensions of human security; and (3) identifying the social conditions that make societies more vulnerable to climate-related migration. In this session, each of these projects will be presented in greater detail along with their current status. We also discuss what we have learned through this process and how it will shape the future direction of CfAS and the Center for Collaborative Synthesis in Archaeology. Finally, we will hear from the leadership of the SAA and EAA about the importance of synthetic research on issues of relevance to modern society.