

# Association *for* Environmental Archaeology

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AEA Newsletter 158

February 2023

Dear colleagues,

I'm delighted to be writing to you as the AEA's newest Chair. First, I must thank our former Chair Gill Campbell. Over her four-year tenure Gill has undertaken a huge amount of work to ensure the Association thrives, including renegotiation of the journal contract with Taylor & Francis, and guiding the AEA through the difficult years of the pandemic. Thanks to Gill's tireless work, and with the support of the other managing committee volunteer members, the AEA is stronger now than it has ever been. I am confident in saying that the AEA is now ready to be as important to the next generation of environmental archaeologists as it has been for many of us. I wish Gill, and the other committee members who recently finished their tenures (Mike Bamforth, Sebastião Lacerda, and Canan Çakırlar), all the best in their endeavours.

In case we haven't met yet, I would like to introduce myself: I'm Michael Wallace. I've been studying and working across varied aspects of environmental archaeology, but I am perhaps best-known as an archaeobotanist with an interest in prehistoric agriculture. The first phase of my career was spent in the Department of Archaeology at the University of Sheffield, progressing from undergraduate student to research fellow. It is with great sadness we all witnessed the regrettable decision to close the Department. The Save Sheffield Archaeology campaign is dear to my heart, and I know the fight goes on. The closure of Sheffield Archaeology should continue to be a stark reminder to all of us of the threat archaeology faces. As its practitioners, it is up to us to be its champions.

Post-Sheffield, I entered the commercial archaeology sector; joining Headland

Archaeology, first as their environment Manager, and now as their Environmental Archaeology Consultant. It is a joy to be directly involved in development-led archaeology, and I am constantly amazed by the scale and quality of archaeological research in the commercial sector. I hope that the trend to see commercial "units" as centres of research excellence continues to accelerate. As I am UK-based, I can only speak with authority on that sector, but I'm acutely aware that the UK is by no means the only part of the world where a substantial proportion of environmental archaeology is done commercially. I look forward to learning about those sectors - and how the AEA can support them - in this new role as Chair of the AEA.

The jewel in the AEA calendar has always been the Autumn Conference. The 42nd conference was held in the wonderful city of Glasgow. Prof. Nicki Whitehouse and her team put on a fantastic event, including a superb programme of talks and posters. To my mind a good conference is one that stimulates you, be it through exposure to new ideas, forging new connections, or rekindling old ones and AEA Glasgow certainly delivered on those terms. For me, as it was for many other delegates, it was the first big conference since the start of the pandemic, and it was rejuvenating to see the discipline in such excellent health.

With the Autumn Conference behind us, we turn to the smaller - but just as bright - jewel, the Spring Conference. I am immensely proud that as well as touching on a topic close to my heart, data science in environmental archaeology, that, under lead organiser Emma Karoune's stewardship, the conference is going to be followed by a practical R training workshop.

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All at no cost to members. As datasets get ever bigger, as the importance of statistical rigour increases, as the power of data story telling grows, and as the principles of open data become ever more essential, both the conference's theme and the workshop's lessons are paramount to the discipline's future. I look forward to catching up with many of you online, starting 13th May.

In the coming months you will be hearing about our future programme of conferences, first with the 2023 Autumn conference and then on into 2024. The proposals we've had in for future conferences are really exciting and we will bring details to you as soon as we can. Throughout my term as Chair the AEA will continue to do all the things it does now. I am also keen, however, to explore new ideas and approaches, and I would welcome your views as members of the AEA as to what you feel our priorities should be going forward (feel free to drop me an **email**). Much of this will be underpinned by continuing the work to grow and diversify our membership.

I would like to end this piece with a quiet moment of reflection. In the last few months our community has lost three people, all taken before their time. Dr Lisa Lodwick, of Oxford University and inbound to do great things at Cambridge, was one of our discipline's most ferocious advocates. Lisa Moffett was known to many for her archaeobotanical research and as a stalwart of Historic England. Angela Walker was one of our most vibrant characters, known for her research in Southwest Asia and in the UK. Each of them was a talented and passionate environmental archaeologist, and our discipline is poorer for their loss. Whilst we mourn their passing I hope we can also take inspiration from their drive to do excellent archaeology. Many of us have, and continue to struggle with, emotionally tough times and, whilst each of us is different, I find some comfort in remembering their passion and drive in our ongoing work.

I wish you all the best and a pleasant spring.

Warm regards,  
**Michael Wallace**



# Roman Turf Geoarchaeology

## Dr Tom Gardner, Historic Environment Scotland

### New geoarchaeological work on Roman turf structures in northern England and Scotland

**Summary:** *New geoarchaeological work in Scotland and northern England has used soil micromorphology to identify the character, likely source, and construction methods of Roman turf architecture in military and defensive contexts.*

*Work undertaken by Dr Tanja Romankiewicz and Dr Ben Russell (University of Edinburgh) as part of the Earthen Empires project was supported by Dr Tom Gardner (Historic Environment Scotland), and used soil micromorphology and other geoarchaeological and material science techniques (including MicroCT scanning led by Dr Riley Snyder) to examine Roman turf wall material from Vindolanda Roman Fort and the Antonine Wall, with both studies available as open-access publications.*

*The analyses at both sites identified (1) intact individual turfs sourced from local grasslands, (2) distinct construction methods, such as the use of clay-rich turfs from adjacent watercourses used as 'cheeks' to increase the angle the wall face could be built at, or the use of inverted turfs and levelling dumps to create distinct 'lifts' within construction phases, and (3) the recutting of turfs from already exploited grasslands, where A horizons were thinner and less developed than turfs lower in the sequence.*

The northern frontiers of the Roman Empire were characterised by defensive lines and, while contemporary texts refer to walls of turf (e.g. in the *Historia Augusta* which explains that Antoninus Pius 'defeated the Britons through the legate Lollius Urbicus, building another wall of turf [aliomuro caespiticio], after driving away the barbarians' (*Scriptores Historiae Augustae*, Antoninus Pius 5.4, see Romankiewicz et al. 2020: 121), archaeological study has not to date interrogated these sources with any methods other than excavation. These turf walls, however, should not just be viewed as simplistic versions of their stone-constructed counterparts, but as complex archaeological deposits in their own right, containing critical information on the Roman Army's

resource procurement strategies, labour, architectural methods, and wider impact upon the local environment through topsoil stripping during construction. Interrogating these walls through geoarchaeological methods allows us to ask important questions of the materials and methods used, rather than simply viewing turf walls as 'primitive' or 'monolithic'.

Accurately identifying earth materials and building techniques macroscopically is not straightforward. The appearance of turf blocks ultimately depends on the characteristics of the grassland from which they were sourced and preservation conditions at the building site. Sections through turf structures vary hugely in appearance, both in comparison to each other as well as across their own surfaces. Turf blocks with a thick layer of preserved organic material look quite different during excavation to those where the grass layer has been disturbed or lost, either prior to use, due to erosion, overgrazing, or trampling, or because it was deliberately trimmed off, or because of post-depositional conditions. Turf blocks cut mostly from lower soil horizons can appear quite different from those comprising topsoil and vegetation layers. This makes distinguishing macroscopically between structures built entirely in turf and those constructed in a combination of turf and dumped earth extremely difficult, especially where turf and loose earth were sourced from the same soils.

Using soil micromorphology as our principal investigative technique (with methods detailed in the papers mentioned) we were able to identify some variations in earth architecture at Vindolanda and on the Antonine Wall.

At Vindolanda, where multi-phase walls of the fort were constructed from turf, the earlier phases were constructed from Mull grassland turf with deep and well developed O and A horizons showing evidence of grazing pressures, but later phases were constructed from Mull grassland turf with incipient (thin and poorly developed) O and A horizons, suggesting that these were cut from areas that had already had turf harvested from them, likely





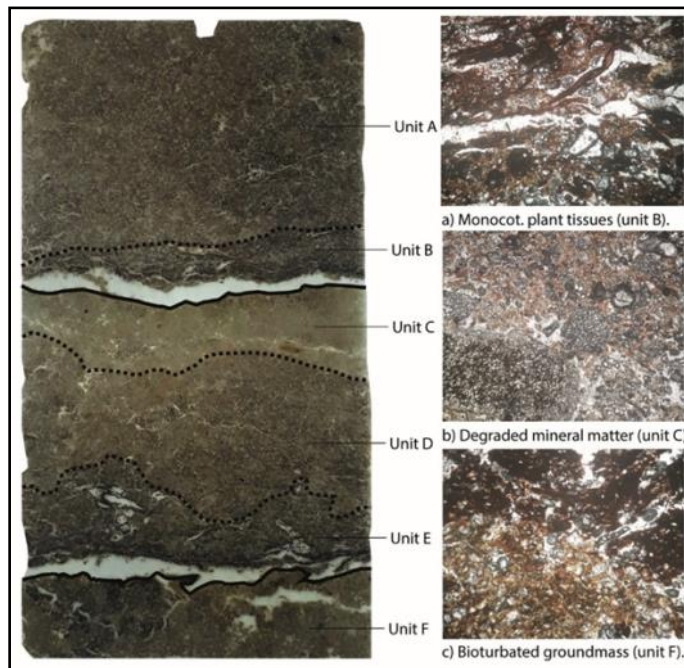


Fig 2: Indicative annotated micrograph from Vindolanda, showing a sequence of inverted turfs - © Tom Gardner.

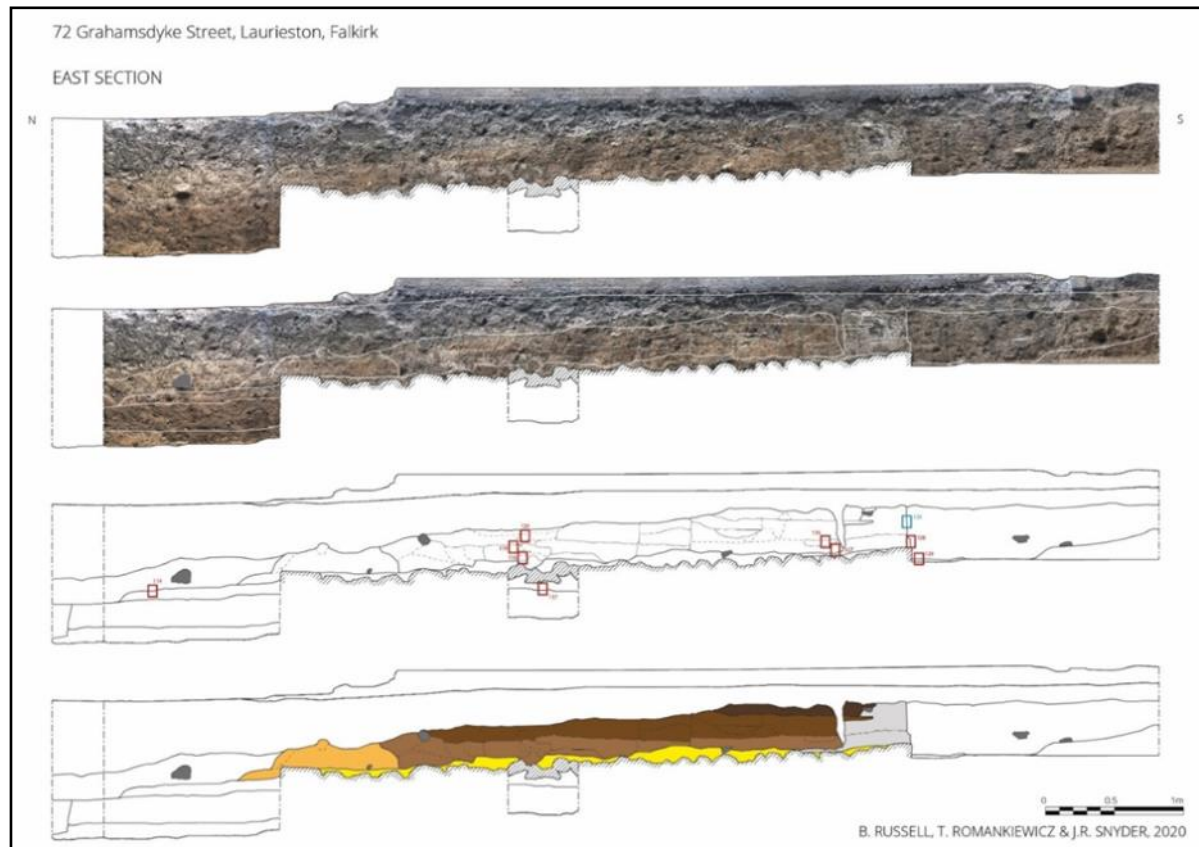


Fig 3: Sampled Section at the Antonine Wall, Falkirk - © Geoff Bailey & Tanja Romankiewicz.

## References

- Russell, B., Romankiewicz, T., Gardner, T., Birley, A., Snyder, J.R. and Beckett, C.T., 2022. Building with turf at Roman Vindolanda: multi-scalar analysis of earthen materials, construction techniques, and landscape context. *Archaeological Journal*, 179(1), pp.169-210.
- FSAScot, T.R., FSAScot, B.R., Bailey, G., FSAScot, T.G., Snyder, J.R. and Beckett, C.T., 2022. 'Another wall of turf': geoarchaeological analysis of the Antonine Wall at 72 Grahamsdyke Street, Laurieston, Falkirk. In *Proceedings of the Society of Antiquaries of Scotland* (Vol. 151, pp. 103-141).
- Romankiewicz, T., Milek, K., Beckett, C., Russell, B. and Snyder, J.R., 2020. 10. New perspectives on the structure of the Antonine Wall. *The Antonine Wall*.

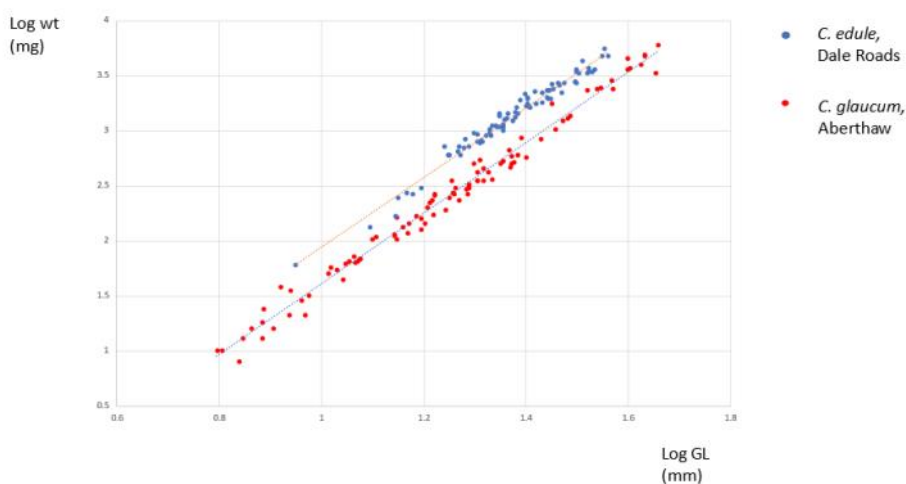
## Two Kinds of Cockle – The Hunt Goes On Bas Payne

Last year, AEA very kindly gave me a grant to help with a project trying to find better distinctions between our two native *Cerastoderma* species (common cockle, *C. edule*, and lagoon cockle, *C. glaucum*), in order to improve the identification of cockles from archaeological sites, and our understanding of past cockle exploitation (AEA Newsletter 155: 8–10). A particular aim was to find metrical separations, as these provide more objective identification and comparison, especially when samples may include both species.

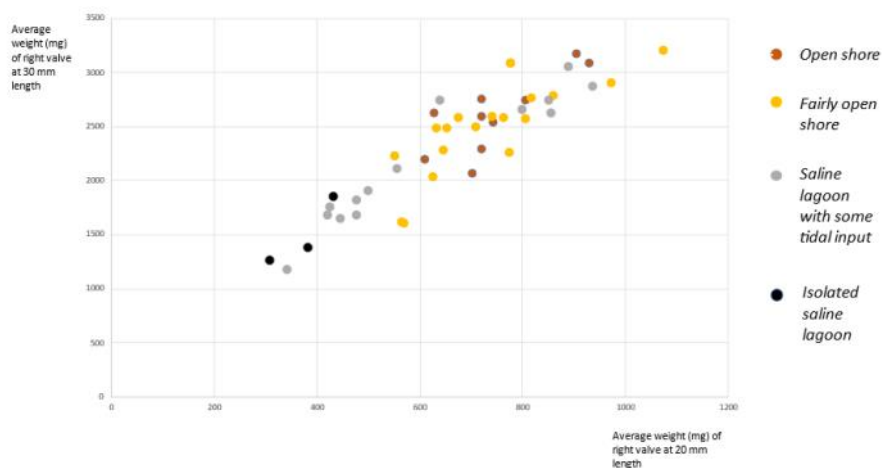
The literature suggests that *C. glaucum* typically has a thinner shell than *C. edule*, and a pilot study using shell weight as a proxy for shell thickness suggested that this gives a good separation between the two

species. Figure 1 shows the clear separation between samples of *C. glaucum* from an isolated saline lagoon in south Wales, and *C. edule* from an open shore in west Wales.

But once over 40 samples from a variety of environments had been collected and measured, a less clear picture emerged, as so often in research. (Many thanks to Michael Given, who very kindly responded to a plea for help in collecting samples, and sent interesting samples from western Scotland). Figure 2 compares average shell weights at each site for shells 20 mm long and 30 mm long, which resolves the problem that different sites produce very different mixes of shells of different sizes.



**Fig 1:** Clear separation between samples of *C. glaucum* and *C. edule* from two Welsh sites when log weight (mg.) of each shell is plotted against log greatest length (mm).



**Fig 2:** Shells from cockle populations in isolated saline lagoons are lighter on average in relation to size than shells from populations on open shores; shells from saline water bodies with some tidal input are widely variable. For each site, the average weight of a shell 20 mm long is plotted against the average weight of a shell 30 mm long, calculated from the site sample trendline.



Cockles from isolated saline lagoons (black dots), showing all the typical characters of *C. glaucum*, have light shells, around 400 mg at 20 mm length, and 1.5 g at 30 mm. In contrast, cockles from open shores (brown dots) and fairly open shores (yellow dots), showing all the typical characters of *C. edule*, are on average nearly twice as heavy, around 600–1000 mg at 20 mm, and over 2–3 g at 30 mm, though with substantial variation. However cockles from saline lagoons with limited tidal input (grey dots) are very variable, covering almost the whole range; and generally look intermediate. Are some of these perhaps hybrids as has often been suggested?

The obvious way to try to identify them and check the possibility of hybridisation is to use DNA characterisation. Fortunately, Professor Manuel Vera, of The University of Santiago, in Galicia, Spain, has been working on cockle DNA; so samples were sent to his laboratory. DNA analysis is not cheap (in this case around £20 a sample), so we had to pick samples carefully; choice was also limited by the availability of tissue samples from live shells. So far 34 samples have been analysed from 12 of the sites – generally 2 samples from each site where identification seemed rather clear, and 4 samples from sites where shells looked intermediate. The results fall very clearly into two groups, differing at seven loci in the target regions, agreeing with previous studies of the two species elsewhere in Europe and without any suggestion of hybridisation. Also where four samples had been tested from a site, they were all the same species – there was no evidence that the two species were living together.

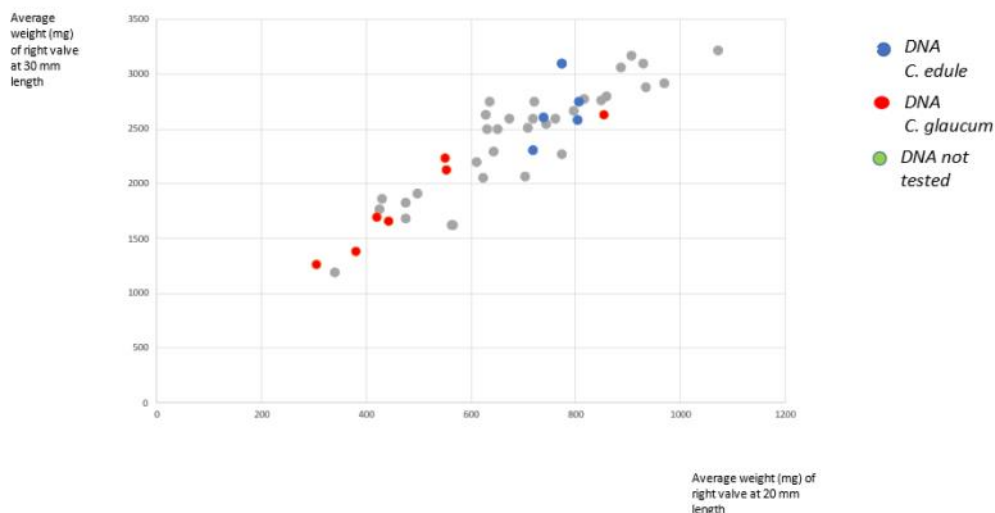
However, as Figure 3 shows, while most of the

results confirm that *C. edule* has heavier shells than *C. glaucum*, one site (Medmerry, a coastal realignment site in Sussex) has a population of *C. glaucum* with shells just as heavy as typical *C. edule*.

Archaeologically, these results are disappointing – while cockle shells from open and fairly open shores and from isolated saline lagoons show an interesting relationship between shell weight and environmental conditions (Fig. 2), the variability of cockle shells from sites with limited tidal input means that we cannot at the moment make valid suggestions about environmental conditions from shell weight, and, biologically, that shell weight is not by itself a reliable means of species identification.

Biologically, the results are interesting even if at the moment confusing. There are three lines of research that seem worth pursuing. First, to use the DNA-confirmed samples to look for better methods of discrimination between the two cockle species; second, to continue to collect samples of cockles, especially from sites with limited tidal input, and analyse DNA samples to identify *C. glaucum* populations; and third, to look in detail at these populations, their habitats, and the other species living with them, to get a better understanding of their biology.

As before, I would welcome any help with collecting samples of cockle and cockle shells from different parts of the UK; if you might be willing to help, please email me ([bas.payne@gmail.com](mailto:bas.payne@gmail.com)) for more details.



**Fig 3:** DNA results are shown for the sites plotted in Figure 2; this shows that while *C. glaucum* generally has lighter shells, one population of *C. glaucum* has shells that are heavier than any of the five *C. edule* sites.

# AEA Winter Conference Review

**Nysa Loudan (PhD Candidate, University of Glasgow)**

This year's conference was entitled, 'The environmental archaeology of landscapes and land-use'. As environmental archaeologists, we stand in a unique position to examine the history and possible futures of human relationships with the landscape and its inhabitants by exploring how our land-use has changed over time. In the midst of the climate and ecological crises facing our world, this conference's presentations aimed to explore how our relationships with landscapes and land-use in the past has shaped humans and our modern world. As stated in the call for papers for this year's conference: 'Humans do not live in isolation from nature'. Presenters engaged with such concepts as multi-species/more-than-human approaches (Ingold, 2013; O'Gorman and Gaynor, 2020) to landscape and landscape change, agent-based modelling, and post-colonial narratives to create 'thicker' understandings of landscape (O'Gorman and Gaynor, 2020: 712), as well as critical takes on conservation movements in government policy, such as 'rewilding' with special reference to the UK (Jørgensen, 2015; Perino *et al.*, 2019; Prior and Ward, 2016). The Keynote, entitled 'Where the sheep climb, and the cattle go: integrating landscape and livestock in Iron Age and Medieval Scotland', was given by Ingrid Mainland of University of the Highlands and Islands.

This conference also included approaches from the digital humanities that explore land-use change, such as agent-based modelling and the capture and processing of cross-discipline datasets through mobile applications. Attendees heard from several regionally based working groups across the world reporting on their progress in the world-wide land-use project LandCover6k.

Themes and issues that emerged during presentations and subsequent discussions included engagement with and critique of the current 'rewilding' movement, with particular focus on the UK. Presentations questioned the assumption that humans are separate from a 'wild' nature and that any human intervention within an environment is inherently destructive and unnatural. Presenters also grappled with what kind of information and

guidance environmental archaeologists can contribute to the policy guidelines and conservation efforts occurring today within the midst of the current climate crisis. Key presentations that spoke to this included Ceren Kabukcu (Univ of Liverpool), who urged a nuanced archaeological view of historically considered 'unproductive' landscapes in their work on semi-arid woodland in Southwest Asia; Claudia Scuito (Univ of Pisa), whose project examines the emergence of 'new wild worlds' in the human-abandoned landscapes in the Apuan Alps (Tuscany, Italy); Michael Given, whose work in post-medieval, Trotternish, Isle of Skye, demonstrates the concept of 'ecologies of care', where crofters on the land have had a direct relationship with the soil along with its ecological legacy; Annabel Everard *et al.*, who engaged with and critiqued the concept of 'ancient' woodlands and their conservation in Scotland, UK; Barry Taylor, who is using multispecies approaches to the Mesolithic through the lens of plants and their relationships with beavers; to name a few.

Other presentations focused on reconstructing the histories of land-use before and after colonialism and engaging with the ecological legacy of colonialism. Projects include Mauritius Island, Indian Ocean (Alex Brown, Wessex Archaeology), the Pollen Atlas Project in Nicaragua (Irene Torreggiani), a template of land-use models for the Philippines (David Max Findley, Max Planck Institute for Geoarchaeology), and legacy of land-use in Jamaica (Sarah Elliot, Bournemouth University). Research from these areas and other underrepresented places hope to inform on future approaches to conservation and sustainable resource management in a post-colonial landscape, as well as reaffirming/highlighting local populations, connection to this land.

The first session on Friday evening explored more creative ways of engaging with archaeologies of landscape and environmental data, sparking conversation at the reception among attendees about how landscape and land use can be engaged with across disciplines.



Use of film making (Gareth Beale, Univ of Glasgow), sound-scaping and sound design (Lizzie Robertson, Univ of Glasgow), poetry (Abbi Flint, Univ of Newcastle), and popular music (Claudia Lubao, Univ of St. Andrews) show means of engaging with landscape as researchers as well as with the public by employing cultural and creative practices. Our scientific-based discipline has room for artistic and creative practice to make sense of the hard data generated from environmental studies.

Several speakers stressed that the histories of environments and landscape include the present-day community (Dr Michael Given, Kenny Brophy (Univ of Glasgow), Claudio Scuito (Uni of Pisa), Alex Brown and colleagues (Wessex Archaeology), Irene Torregiani and colleagues (Univ of Oxford) and Emilie Green (Univ of Aberdeen). Our information, our research, and how the present-day community engages with and perceives the landscape, informs the way that we speak, discuss, and create policy around future land use and conservation efforts. As environmental archaeologists, our methods sketch a more nuanced view of the past land by unpicking human activity from other natural processes. Injection of detailed histories of past humans interactions with landscape can lead to more nuanced policy surrounding future land use or non-use. Presenters who engaged with palaeoenvironmental records to disentangle more minute events of the past, as well as those who are

engaging with legacy data across large regions ,included Tim Mighall (Univ of Aberdeen), Ben Pears et al (Univ of Southampton), Julia Cussans and colleagues (UHI), Michael Wallace *et al.* (Headland Archaeology and MOLA-Headland Infrastructure (MHI)), Harry Manley (Bournemouth Univ), Dave Cowley (Historic Environment Scotland), Phil Barratt and colleagues (Univ of Nottingham), and the enormous endeavour undertaken by regional groups as a part of the world-wide LandCover6k project.

#### References:

- Ingold, T., 2013. Anthropology Beyond Humanity. *Suom. Antropol. J. Finn. Anthropol. Soc.* 38, 5–23.
- Jørgensen, D., 2015. Rethinking Rewilding. *Geoform* 65, 482–488.
- O’Gorman, E., Gaynor, A., 2020. More-than-Human Histories. *Environ. Hist.* 25, 593–895.
- Perino, A., Pereira, H.M., Navarro, L.M., Fernández, .N., Bullock, J.M., Ceaşu, S., Cortés-Avizanda, A., van Klink, R., Kuemmerle, T., Lomba, A., 2019. Rewilding Complex Ecosystems. *Science* 364, 1–8.
- Prior, J., Ward, K., 2016. Rethinking Rewilding: A Response. *Geoform* 669, 132–135.



## **AEA Spring Conference 13th—15th May 2023**



The AEA Spring Conference will be taking place online on 13th May 2023, with optional Basic R training sessions on 14th – 15th May 2023.

**Title:** Data Science in Environmental Archaeology

**Organisers:** Emma Karoune and Matt Law

Following our highly successful Spring conference in 2021 on Open Science Practices in Environmental Archaeology, we want to extend this topic by focusing this year's spring conference on the applications of and innovations in data science approaches to environmental archaeology. This will be a fully online conference, and the training is also online – all speakers and attendees will be able to join from anywhere by using a zoom link sent when you register. A registration form will be advertised once we have confirmed the programme in early April.

In this conference we would like to explore how environmental archaeologists as a community are dealing with data and using data in their research. This is data science in the broad sense. We are looking for new directions and initiatives around data science, including new methods and types of analysis, new ways to manage data, implementation of new data stewardship approaches, and new ways to share and publish data.

Data is at the heart of all of our research and it is a precious commodity that should be treated with the same care as archaeological remains. To get the most out of our data and to be able to integrate different types of data together, we need to think about how it is structured and how we can best manage data. As the size and breadth of data grows, what new ways can be developed to interrogate our data to generate new insights? What new perspectives from the past emerge from bringing disparate datasets together or re-analysing existing datasets? And what are these new approaches that we might want to exploit for data integration and novel research?

We are looking for papers that consider:

- New methods of data management and stewardship, such how we can use the FAIR (Findable, Accessible, Interoperable, Reusable; [Wilkinson \*et al.\* 2016](#)) data and CARE (Collective Benefit, Authority to Control, Responsibility, and Ethics; [Carroll \*et al.\* 2022](#) ) principles
- Standard vocabularies and ontologies
- New types of data analysis methods
- Statistical modelling and 'Big Data' methods
- Machine-learning and AI applications
- The integration of different types of data to answer archaeological questions in novel ways

We are equally interested in hearing about new research directions in this topic from early career researchers and established innovators.

Please submit your details with a title and abstract using this [form](#).

**Deadline for paper submission is 31st March 2023.**

General queries about the conference can be addressed to [ekaroune@turing.ac.uk](mailto:ekaroune@turing.ac.uk)

We look forward to seeing you there!

## References

Wilkinson, M.D., Dumontier, M., Aalbersberg, I.J., Appleton, G., Axton, M., Baak, A., Blomberg, N., Boiten, J.W., da Silva Santos, L.B., Bourne, P.E. and Bouwman, J., 2016. The FAIR Guiding Principles for scientific data management and stewardship. *Scientific data*, 3(1), pp.1-9.

Carroll, S.R., Garba, I., Figueroa-Rodríguez, O.L., Holbrook, J., Lovett, R., Materechera, S., Parsons, M., Raseroka, K., Rodriguez-Lonebear, D., Rowe, R. and Sara, R., 2020. The CARE principles for indigenous data governance.

## **SAA Archaeobotany Interest Group 88th Annual Meeting 29th March–2nd April 2023 Portland, Oregon, USA**

The Archaeobotany Interest Group focuses on fostering a community and network for Society for American Archaeology (SAA) members interested in a broad range of professional and scholarly issues in the field of archaeobotany/palaeoethnobotany, and its related disciplines. All members are welcome to partake regardless of academic or professional standing. There will be no charge to join this group.

The Archaeobotany Interest Group has the following objectives:

- to promote the study, understanding, and importance of contemporary archaeobotany and its related sub-fields
- to facilitate the development of collaborations and networks across archaeobotanists nationally and internationally
- to promote the development of community-based and collaborative archaeobotanical research, that works closely with descendant communities
- to provide support to students and junior professional members through mentorship and guidance
- to promote professional ethics in the training of archaeobotanists and others who work with archaeological plant remains
- to encourage public engagement and community outreach and the broader dissemination of archaeobotanical research
- to serve as a voice and point of contact for SAA members interested in issues related to archaeobotany, in order to facilitate communication and awareness of current news, public policies, ethical concerns and announcements.

The Archaeobotany Interest Group's Activities include the following:

- the Archaeobotany Interest Group will hold an annual gathering(s) at the SAA Annual Meeting (with a formal meeting typically after the SAA annual evening business meeting Friday 7– 8pm)
- the group will submit an annual report of activities/members to the SAA Board of Directors as requested
- to sponsor sessions, forums, symposia, workshops during the annual SAA meeting
- to provide a forum to distribute information on professional and academic opportunities (grants, fellowships, scholarships, field schools, pertinent legislation, and conferences)
- to include and encourage students, professional archaeologists, museum curators, and public interest groups in the Archaeobotany Interest Group activities and discussions
- the group may propose positions and/or policy statements for consideration through the Executive Director of the SAA Board of Directors
- the group may publish an e-newsletter or sponsor a special publication of the Archaeobotany Interest Group with the SAA Publications Committee.



# IMAA 2023

## 1st–2nd April 2023

The next Integrated Microscopy Approaches in Archaeobotany (IMAA) workshop will be held on 1st – 2nd April 2023 at the University of Reading, UK.

08.45–17.00 1st April

09.45–15.30 2nd April

The themes for the 2023 workshop are:

- Archaeo- and Palaeobotanical Approaches to Tropical Agriculture
- Innovation in Microanalysis, Taphonomy and Identification
- Rewilding and Conservation
- Science Communication of Archaeo- and Palaeobotanical Data
- Sustainable Uses of Plants
- The Archaeobotany of the Islamic West

The 2023 workshop will follow the format of oral presentations in the morning and microscopy sessions and round table discussions in the afternoon.

The following discussion sessions will take place:

### ***How do we Find and Preserve Archaeobotanical Reference Collections— Physical and Digital?***

Chaired by Dr Emma Karoune, Historic England and The Alan Turing Institute, and Dr Sarah Elliott, Bournemouth University, IMSET

### ***Phytolith Analysis and Fluorescence Microscopy***

Chaired by Dr Luc Vrydaghs, Dr Yannick Devos, MARI, VUB, and Dr Martin Hodson, University of Oxford

### ***Communicating Archaeo- and Palaeobotanical Data in Public Archaeology***

Chaired by Dr Rowena Banerjea, University of Reading, and Paul Flintoft, University of Reading and York Archaeological Trust

The participation charge to attend the IMAA is £35 and it will include lunch and refreshments.

A small meeting of the Working Group of Archaeological Soil Micromorphology ([WASM](#)) will be held before the IMAA on 30th – 31st March as a separate event.



## Stable Isotope Working Group (SIZWG) 23rd–24th March 2023, Berlin, Germany

The **Stable Isotope Working Group** for ICAZ (SIZWG) was established in 2012 under the coordination of Dr Suzanne Pilaar-Birch, and has been a space where researchers can meet and discuss research findings and developments. It is with great pleasure that Maaïke Groot, Jana Eger, Elke Kaiser (Institute for Prehistoric Archaeology at the Freie Universität) and I (Referat für Naturwissenschaft, DAI) announce the first call for the SIZWG conference, which will be held on the 23rd–24th March 2023.

### Beyond the baseline: broadening stable isotopic horizons in zooarchaeology

In the last 20 years, stable isotopic measurements of faunal material have been a common feature of archaeozoological investigation into past animal ecologies and interactions between human societies and local environments. The growing body of results demonstrates the power of animal tissues to record environmental and climatic change in the past and the adaptation of hunting/herding practices in response (directly or indirectly) to these changes, for example, with the emergence of pastoralism. Alongside this, there has been a growing awareness of ethical issues related to sampling heritage collections and our role as custodians to prevent/reduce sample destruction. Methodological advances and BIG data analyses have reduced the need for destructive sampling.

The planned sessions are:

State of the art, good practices and ethical sampling  
Reconstruction of palaeoenvironments and climates  
Hunting, herding, husbandry and hustling

We encourage presentations (oral/poster) that integrate traditional archaeozoological analysis (sex, size, shape) with stable isotopic approaches as well as biomolecular, such as aDNA and proteomics, and archaeobotanical approaches, at different scales: local narratives to regional perspectives. Inspired by the events of recent years (loss of archives due to natural and human-induced catastrophes, such as conflict and global pandemics), we would like to hear how researchers have overcome challenges and developed new methodologies and perspectives.

Conference registration is now **open!**

Any other enquiries please email: [sizwg2023@gmail.com](mailto:sizwg2023@gmail.com)

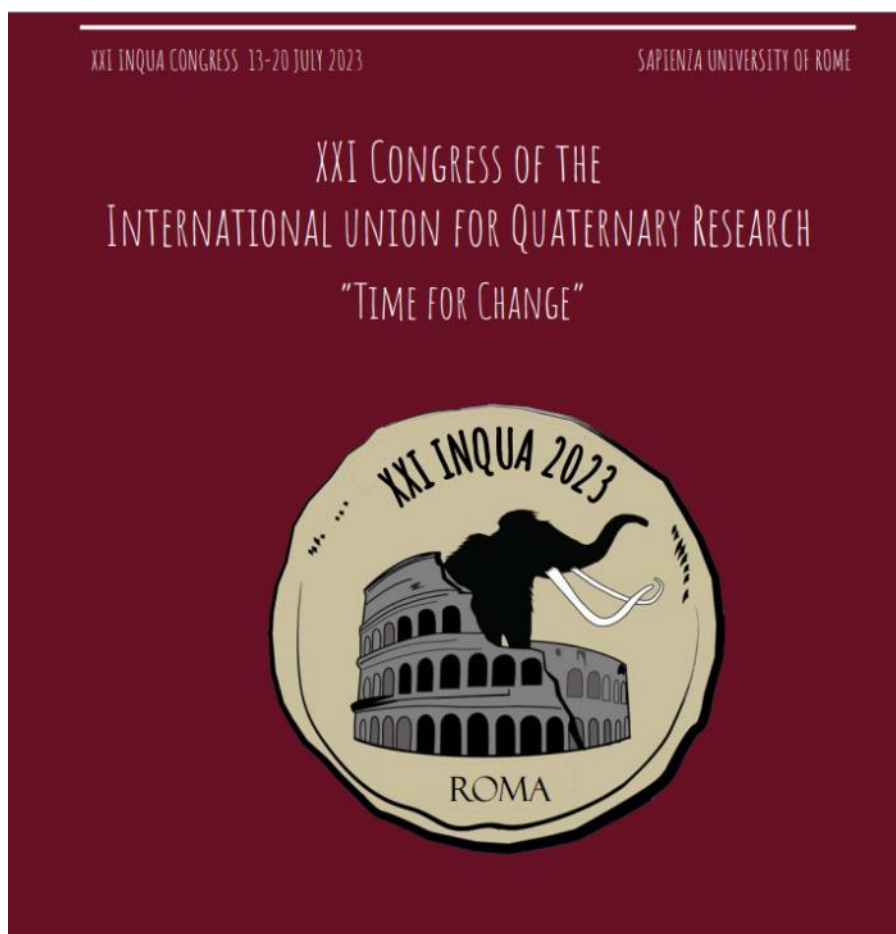
We look forward to seeing many of you in Berlin.

Roz Gillis



# INQUA

## Sapienza University of Rome 2023



It is our pleasure to invite you to Rome for the XXI INQUA Congress from 13th– 20th July 2023. The organisers of the INQUA Rome 2023 Congress offer a very ambitious programme around the theme, “Time for Change”, emphasising the critical role of Quaternary sciences in contributing the knowledge we need to face current societal and climate challenges.

The following Themes and Subthemes have been identified.

1. From Natural Processes to Geohazards
2. Landforms, facies architecture and sequence stratigraphy
3. Quaternary environments and human evolution: fossil record, phylogeny, palaeobiology, palaeoecology and cultural models
4. Ecosystems and biogeography from late Pliocene to Anthropocene
5. Climate record, processes and models
6. The Quaternary time machine

Registration fees will cover lunches, morning and afternoon refreshments, the icebreaker party and congress materials including a congress programme and abstracts (on pendrive). We are planning to provide the programme and abstracts on a Congress app, which will be downloadable for tablets and smartphones and will allow users to compile their own personalised programme. Early registration will be available until 20 February 2023, after which the regular registration fees will apply. On-site registration will be possible at higher rate (late registration).

## OVERALL STRUCTURE OF THE XXI INQUA CONGRESS

<b>Pre-Congress Field Trips</b>	Friday 7 July to Thursday 13 July 2023
<b>Onsite registration opens, Exhibition setup, some business meetings</b>	Thursday 13 July 2023
<b>Icebreaker party</b>	Thursday evening, 13 July 2023
<b>Opening Ceremony and First Session</b>	Friday 14 July 2023
<b>Scientific Programme</b>	Friday 14 July to Thursday 20 July 2023
<b>Mid-Congress Field Trips</b>	Sunday 16 July 2023
<b>Congress Dinner</b>	Tuesday 18 July 2023
<b>General Assembly and Closing Ceremony</b>	Thursday 20 July 2023
<b>Post Congress Field Trips</b>	Thursday 20 July to Tuesday 25 July 2023

<b>Early Registration</b>	<b>450 €</b>
<b>Regular Registration</b>	<b>580 €</b>
<b>Late Registration</b>	<b>750 €</b>
<b>Student Early Registration</b>	<b>180 €</b>
<b>Student Regular Registration</b>	<b>220 €</b>
<b>Student Late Registration</b>	<b>300 €</b>
<b>One-day Registration</b>	<b>350 €</b>

**28th February 2023** – Early bird registration closes, field trip registration closes, regular registration opens

**20th March 2023** – Deadline for presenting authors to finalise their payment, in order to be included in, or be deleted from, the final programme.

**15th June 2023** – Third circular including the final programme

**10th July 2023** – Regular registration closes and late registration opens

**13th July 2023** – On-site registration opens



# Frontiers in Environmental Archaeology

## Call for Contributions

Call for contributions to a special issue of *Frontiers in Environmental Archaeology* entitled:

### Natural Resource Exploitation in Mountain Environments: New Theoretical and Methodological Approaches

Mountain research during the last five years has seen significant developments in areas related to Archaeology survey, Archaeozoology, Archaeometry, Molecular/Biomolecular Archaeology, Micromorphology and the Palaeoenvironment, with the integration of new theoretical/conceptual frameworks and the application of new methodologies. Digital image analysis, ancient environmental DNA or proteins, bulk or compound-specific isotopic analyses and molecular biomarkers such as organic compounds (HAP, miliacin, stanol...), are allowing important advances in the characterisation of human activities and practices as well as of landscape changes. This progress is key to the better identification of changes in mountain economies. Therefore, at present, the scientific community has a novel dataset that has the potential to yield significant information about the complex exploitation of natural resources in mountain environments, allowing us to rethink our understanding of past human, animal and landscape interactions in these sensitive environments.

With this Research Topic we aim to illustrate how these new theoretical and methodological approaches improve the knowledge about the exploitation of mountain natural resources. Any article type dealing with the following topics in mountain environments over time and space will be welcome:

- Large-scale and micro-regional reconstructions of mountain landscape changes.
- Animal exploitation, mobility and transhumance.
- Mountain agricultural activities and practices.
- Exploitation of mineral resources.
- Environmental dynamics and fire use.
- Permanent versus short-term mountain occupations.
- Mountain economies.

 frontiers | Research Topics

Natural Resource Exploitation in Mountain Environments: New Theoretical and Methodological Approaches

[Open for submissions >](#)

#### Guest Editors:

Dr. Lúcia Colominas, Institut Català d'Arqueologia Clàssica

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#### DEADLINE FOR SUBMISSION OF MANUSCRIPTS:

28th June 2023 (previous expression of interest to the guest editors is expected).

## Don Brothwell Prize Winner 2022

The following papers were shortlisted by the editor and the editorial board of the journal *Environmental Archaeology* for the 2022 Don Brothwell prize:

- van den Hurk, Y., Spindler, L., McGrath, K., & Speller, C. (2022) Medieval Whalers in the Netherlands and Flanders: Zooarchaeological Analysis of Medieval Cetacean Remains, *Environmental Archaeology*, 27:3, 243–257, [DOI: 10.1080/14614103.2020.1829296](https://doi.org/10.1080/14614103.2020.1829296)
- Cummings, V. & Morris, J. (2022) Neolithic Explanations Revisited: Modelling the Arrival and Spread of Domesticated Cattle into Neolithic Britain, *Environmental Archaeology*, 27:1, 20–30, [DOI: 10.1080/14614103.2018.1536498](https://doi.org/10.1080/14614103.2018.1536498)
- Marston, J.M., Çakırlar, C., Luke, C., Kováčik, P., Slim, F.G., Shin, N. & Roosevelt, C.H., 2022. Agropastoral Economies and Land Use in Bronze Age Western Anatolia. *Environmental Archaeology*, 27:6, 539–553., [DOI:10.1080/14614103.2021.1918485](https://doi.org/10.1080/14614103.2021.1918485)
- Weitzel, E. M., Coddling, B. F., Carmody, S.B., & Zeanah, D. W., (2022) Food Production and Domestication Produced Both Cooperative and Competitive Social Dynamics in Eastern North America, *Environmental Archaeology*, 27:4, 388–401, [DOI: 10.1080/14614103.2020.1737394](https://doi.org/10.1080/14614103.2020.1737394)
- Timpany, S., Mighall, T., Foster, I., Cortizas, A. M., Owen, O., Krus, A. & Kamerling, I., (2022) Later Prehistoric and Norse Communities in the Northern Isles: Multi-Proxy Environmental Investigations on Orkney, *Environmental Archaeology*, 27:2, 146–167, [DOI: 10.1080/14614103.2020.1803014](https://doi.org/10.1080/14614103.2020.1803014)

We are delighted to announce that the winner is:

van den Hurk, Y., Spindler, L., McGrath, K., & Speller, C. (2022) Medieval Whalers in the Netherlands and Flanders: Zooarchaeological Analysis of Medieval Cetacean Remains

Peter Genem, Taylor & Francis' managing editor, who decides the final winner, commented:

*'I thought it was a great zooarchaeological study combining the use of historical records as well as examination of the bones themselves, especially the use of ZooMS to identify specimens. The study helps to shed light on many early whaling activities and on the possible consumption patterns related to social standing within Dutch medieval society.'*

Alexandra Livarda of the AEA committee said:

*'I believe it is an excellent paper that showcases the great research achievements we can reach combining different lines of evidence. It allows fascinating insights into people's engagement with the sea and whales in the past.'*

ENVIRONMENTAL ARCHAEOLOGY  
2022, VOL. 27, NO. 3, 243–257  
<https://doi.org/10.1080/14614103.2020.1829296>



## Medieval Whalers in the Netherlands and Flanders: Zooarchaeological Analysis of Medieval Cetacean Remains

Youri van den Hurk <sup>a,b</sup>, Luke Spindler <sup>c,d</sup>, Krista McGrath <sup>d,e</sup> and Camilla Speller <sup>d,f</sup>

<sup>a</sup>Institute of Archaeology, University College London, London, UK; <sup>b</sup>Groningen Institute of Archaeology, University of Groningen, Groningen, The Netherlands; <sup>c</sup>Oxford Radiocarbon Unit, University of Oxford, Oxford, UK; <sup>d</sup>BioArCh, Department of Archaeology, University of York, York, UK; <sup>e</sup>Department of Prehistory, Universitat Autònoma de Barcelona, Bellaterra, Spain; <sup>f</sup>Department of Anthropology, University of British Columbia, Vancouver, Canada

### ABSTRACT

Medieval historical sources suggest that cetacean exploitation was, for large parts of Europe, restricted to the social elite. This appears to have also been the case for the Netherlands and Flanders. It remains unclear, however, how frequently active hunting was undertaken, and which species were targeted. Zooarchaeological cetacean remains are often recovered from Medieval (AD 400–1600) sites in the Netherlands and Flanders, however the majority of these specimens have not been identified to the species level, leaving a substantial gap in our knowledge of past cetacean exploitation. By applying ZooMS, as well as morphological and osteometric analyses, these zooarchaeological specimens were identified to the species level. This analysis revealed that the North Atlantic right whale (*Eubalaena glacialis*), sperm whale (*Physeter macrocephalus*), and grey whale (*Eschrichtius robustus*) were frequently exploited. Active whaling appears to have been undertaken as well, especially in Flanders and in Frisia (the northern part of the Netherlands). Zooarchaeological cetacean remains appear to be present with relative frequency at high-status sites such as castles, as well as ecclesiastical sites, confirming the historical evidence that the social elite indeed did have a taste for cetacean meat. However, cetacean products were also available outside of elite and ecclesiastical contexts.

### ARTICLE HISTORY

Received 13 November 2019  
Revised 9 May 2020  
Accepted 2 September 2020

### KEYWORDS

Zooarchaeology;  
Netherlands; Flanders;  
cetacean; whaling; ZooMS

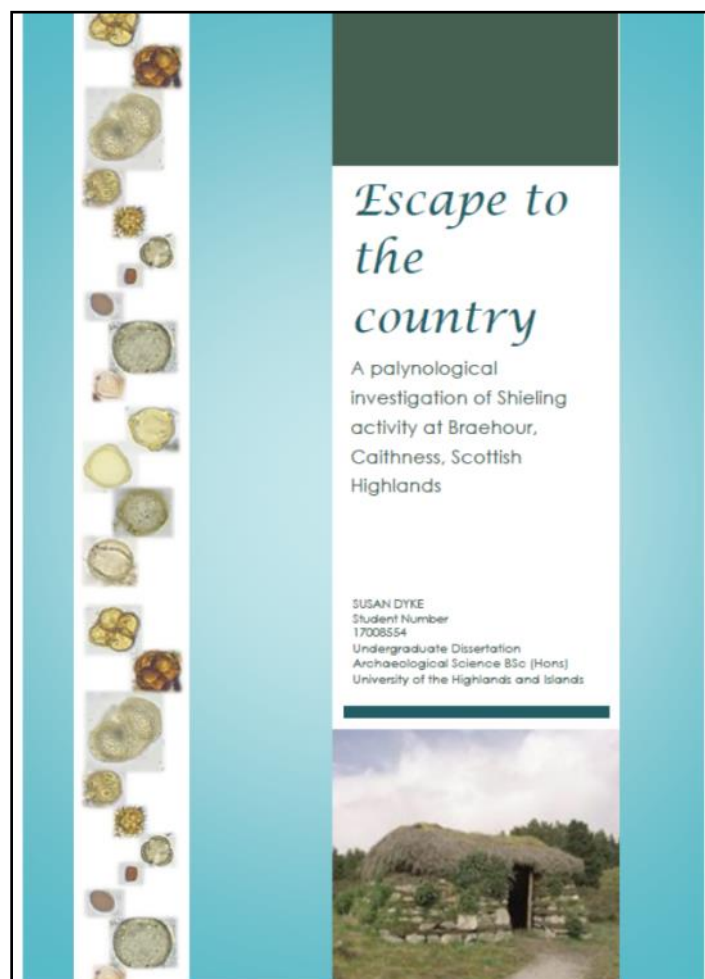
## John Evans Prize Winners 2022

The undergraduate winner of the John Evans Prize for 2022 is:

Susan Dyke, from the University of the Highlands and Islands, with a dissertation entitled *Escape to the country. A palynological investigation of Shielling activity at Brae hour, Caithness, Scottish Highlands*.

Her project used fine-resolution pollen analysis, supported by archaeological survey and historical documentary evidence, to investigate the land-use, economy and environmental impact of postmedieval shielings at Brae hour.

The results were the first integrated approach to the study of post-medieval Caithness shielings, and the first Caithness post-medieval focused pollen analysis. The research adds to the limited post-medieval palaeoenvironmental record for Caithness and Scotland, and to the small number of integrated Scottish shieling studies. They provided a new pre-historical land-use record and give a better understanding of the environmental interaction and economy sustained by the Brae hour shielings c. AD 1460–1860, including evidence of community resilience during the Little Ice Age.

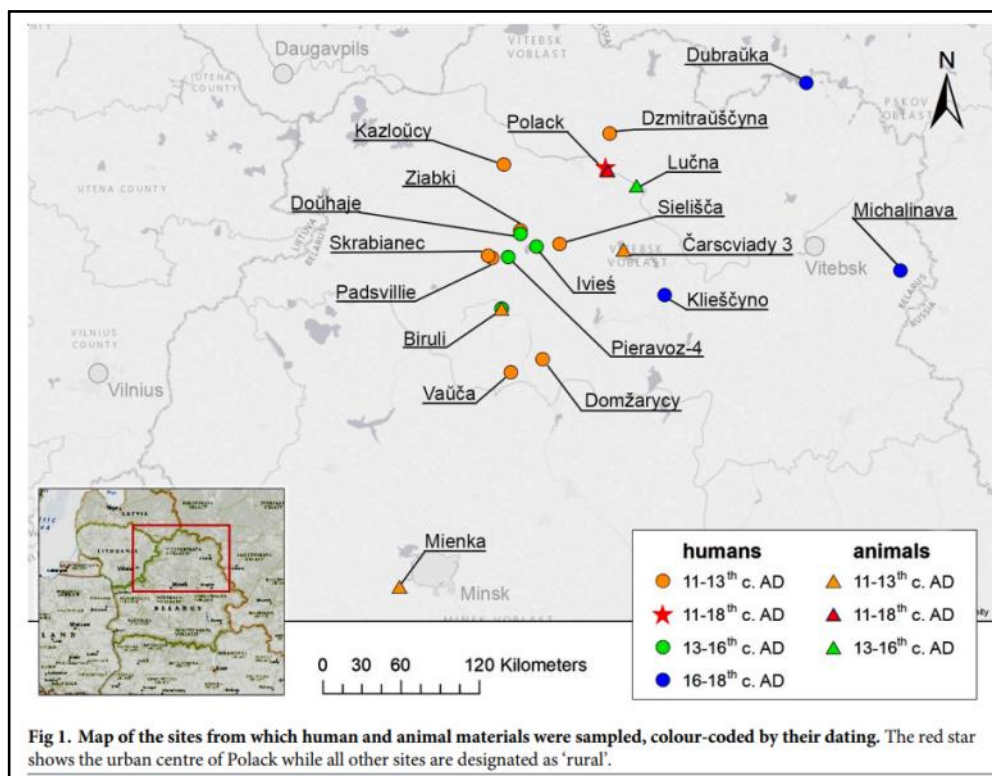




### The postgraduate (Masters) winner of the John Evans Prize for 2022 is:

Vera Haponava, from the University of Warsaw, with a dissertation entitled *Medieval and early modern diet in Polack, Belarus*. The subsequent article by Haponava *et al.* can be accessed [here](#).

In western and north-western Europe there has been a growing focus on exploring how major economic, political and social changes during the medieval period impacted the lived experience of different populations and sectors of society. Stable isotope analysis has proven particularly powerful in this regard, providing direct insights into the long-term diets of individuals and communities. Despite experiencing similarly dramatic social reconfigurations and changes, eastern Europe has, however, received far less attention in this regard. The territory of Belarus has, especially, so far remained a relative blank spot on the bioarchaeological map of Europe, though cities such as Polack emerged rapidly as key nodes within a growing economic and religious network. To gain direct insight into the diets of inhabitants of the Polack region of Belarus in the 11th–18th centuries, we applied stable carbon and nitrogen isotope analysis to bone and dentine collagen from human ( $n = 143$ ) and animal ( $n = 105$ ) individuals from the city of Polack and surrounding rural sites. Results indicate a diet based on C3 terrestrial resources, which did not differ between sexes and showed limited variation over time. Contrary to expectations, it appears that animal products were commonly consumed by rural dwellers, but no significant reliance on fish resources or millet consumption is found. In contrast to examples from western Europe, we argue that the diets in the city and the surrounding villages remained broadly similar for the majority of the population, and similar to commoners analysed in Poland and Lithuania, perhaps suggestive of slightly different economic changes operating in this part of the medieval world.





# Trending in Environmental Archaeology



Welcome to our Social Media roundup of all things environmental archaeology! Here you will find snapshots from social media selected by our student representative to provide a flavour of what has been happening online in the world of environmental archaeology during the last quarter. If you have a particular social media campaign that you would like featured on this page, please email the newsletter editor [newsletter@envarch.net](mailto:newsletter@envarch.net)

Leon Dash @DashDeCosta · Feb 9

Frontiers in **Environmental Archaeology** reveals that these crabs have been on the menu for a long time. In a cave 20 miles from Lisbon, researchers discovered charred remnants of shells: evidence that Neanderthals were cooking crab 90,000 years ago.



nytimes.com

Neanderthal Crab Roast Leftovers Are Found in a Portuguese Cave  
Researchers said the paleontological remains were another sign that our early human cousins had intelligence.



IANSA @IANSAJournal · Jan 23

The second decade of **environmental archaeology** at the University of South Bohemia. [iansa.eu/papers/iansa-2...](https://iansa.eu/papers/iansa-2...)

**Laboratory of Archaeobotany and Palaeoe...** @LAPE\_... · Jan 23

Celebrating 20 years of the Laboratory of Archaeobotany and Palaeoecology at @jihoceskauni in České Budějovice! 🍷🔬🌱🪵  
[iansa.eu/papers/iansa-2...](https://iansa.eu/papers/iansa-2...)



Dr Lara González Carretero  
@Lariense

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### ***The AEA***

*The AEA promotes the advancement of the study of human interaction with the environment in the past through archaeology and related disciplines.*

*We hold annual conferences and other meetings, produce a quarterly newsletter for members, and publish our conference monographs, as well as our journal 'Environmental Archaeology: The journal of human palaeoecology'.*

## **Key Dates**

### **Stable Isotope Working Group**

23rd–24th March 2023

### **88th Annual Meeting of SAA**

29th March–2nd April 2023

### **IMAA**

1st–2nd April 2023

### **AEA Spring Conference**

13th–15th May 2023

### **INQUA Roma**

13th–20th July 2023

We are always keen to receive newsletter content, especially from our non-UK members. We accept short research pieces, thesis abstracts, conference announcements and calls for papers, and are always open to other suggestions.

To submit please email word documents and images to:

[newsletter@envarch.net](mailto:newsletter@envarch.net)

Next deadline for content is 20th April 2023 for inclusion in the May newsletter

*Daisy Spencer*

With thanks to our proofreader Eva Fairnell