

Methods Statement: Exploring the Easter E.g. – Shifting Baselines and Changing Perceptions of Cultural and Biological ‘Aliens’

Background

Exploring the Easter E.g is a 3-year interdisciplinary project funded by the Arts and Humanities Research Council.

Easter is the most important event in the Christian calendar, yet astonishingly little is known about when it first appeared in Britain, the origins of its component customs – e.g., the gifting of eggs purportedly delivered by the Easter ‘bunny’ – or how they coalesced to form current practices. Like Easter itself, the animals associated with the festival (the brown hare, rabbit and chicken) are ‘alien’ to Britain. This project brings together several disciplines, including archaeology, genetics and linguistics, to investigate how and when the brown hare and rabbit came to be introduced to Britain, their cultural impact, and role in the development of the modern Easter celebration.

Collaboration

The success of our project depends on collaboration with numerous colleagues across multiple disciplines. We actively seek additional partners with an interest in the questions at the heart of the project. Our approach to collaboration is to offer authorship on our papers to everyone who has assisted in the generation of ideas and data, unless you opt for an acknowledgement instead. We have found that this inclusive approach to interpretation and presentation of data aids the production of better papers, with friendly communication before, during and after publication.

Zooarchaeological analysis

Lagomorph bones are difficult to identify (particularly the separation of brown hare and mountain hare) and therefore we are developing new methods for speciation. Bone measurements will be recorded to develop metrical methods of speciation and investigate size changes through time. Some of these data can be recorded on-site but, as the process is time consuming, we are keen to explore the possibility of taking materials off-site for analysis to be undertaken in our laboratories.

Having recorded all metrics and zooarchaeological data, we will then adopt a selective sampling technique for the following analyses.

Geometric Morphometrics (GMM)

This is a non-destructive technique that involves the analysis of bone shape in 2D and 3D using photographs. It provides even more detailed information than standard measurements regarding the shape of lagomorph bones. We will focus on the astragalus, calcaneus and tibia but would need to take these specimens off site for analysis in our GMM lab at the University of Exeter.

DNA

DNA analysis will provide valuable information regarding the development of particular traits within lagomorphs and answer questions about the introduction of different species and interactions between them. It will also allow us to test species designations made using the zooarchaeological and morphometric techniques discussed above. DNA analysis requires

around 0.5g of bone and we would seek to use specimens that have been 3-D scanned for GMM. We are happy to look at photographs of the material and have a conversation about destructive sampling in general. Our DNA research is led by the University of Oxford.

Stable Isotopes

Carbon and nitrogen isotopes are well-known tools for identifying the varying proportions of different sources of protein consumed by individuals. They can be used to detect aspects such as the ratios of marine and terrestrial food eaten, as well as the balance of plant and animal foods ingested. Oxygen and strontium isotopes, meanwhile, can be used to investigate patterns of animal migration and movements. For these techniques we propose to take samples of around 0.5g. Any bones may be used for this, although those with the greater density are more likely to produce successful results. As with DNA sampling, we are happy to look at photographs of the material and have a conversation about destructive sampling in general. These analyses will be undertaken at the University of Exeter.

Contact details and analysis locations

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