A digital workshop

Animal husbandry in the interconnected Mediterranean (1200–150 BC): an integrated zooarchaeological perspective

For much of its history, the Mediterranean Sea has acted as a gateway rather than a barrier. Its maritime routes facilitated the dispersal of a wide range of technologies and practices, which developed into interconnected economic and social systems. The period from 1200–200 BC was a moment of particular interest in this process, when intra-Mediterranean connectivity flourished as never before, and outward-facing ports and cities came to share a notable degree of economic interdependence, iconographic vocabulary, and, eventually, political unification. However, within this period of substantial socio-economic change, zooarchaeological studies typically focus on regional, land-based study areas: comparisons between east and west, or north and south, of the Mediterranean Basin are rarely pursued.

This workshop aims to provide a comparative perspective on Mediterranean zooarchaeology and to facilitate greater discussion between specialists working in different areas of the Mediterranean region. The focus of the meeting is on c. 1200–150 BC, encompassing a period between the collapse of Late Bronze Age societies and Roman Republican expansion. Zooarchaeological research has already highlighted several important trends over this period, including the re-organisation of husbandry models in response to urbanisation, the translocation of particular species (chickens, cats, donkeys), and significant and regionally distinct changes in livestock size and morphology. This workshop aims to better understand these developments from a Mediterranean perspective, and to address long-held historical hypotheses (e.g. Romans in Italy improved their animals with cattle from Greece) with zooarchaeological data.

Programme: Training, Presentation, Publication

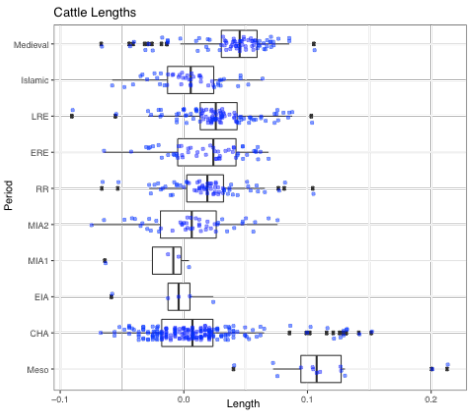
At the core of the programme is the online workshop. In order to facilitate comparisons of zooarchaeological data at this digital meeting, an **optional** training session has been organised in advance. This online session will provide training in log ratio analysis in R software and the Zoolog package, allowing calculation of thousands of log ratio values in seconds.

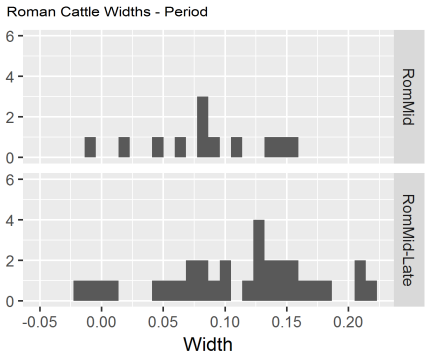
1. Training (optional) - *18–20 January 2021*
Content: An introduction to R, log standard index (LSI) values in zooarchaeology, and calculating and graphing LSI values in the Zoolog package **Day 1** - morning: Individual sessions to install and check that R, conferencing software, and files work properly. **Day 2** - morning: Introduction to Log Ratios, R software, and Zoolog package. **Day 3** - full day: Individual sessions for working with package with participants' own data. **Rest of the week** - individual troubleshooting sessions (where needed).
2. Presentation: Online Workshop on Mediterranean Zooarchaeology - *24–25 March 2021*

20-minute presentations + 5 minutes for questions, spaced over 2 days (c. 2–3 hours each day) Share results for your area of expertise, and see how these compare with other areas of the Mediterranean. Use the Zoolog package or your own methods.
3. Publication
We hope to publish the workshop as a special issue of a journal (e.g. Quaternary International)

Training in R - why?

R is a free software environment for statistical computing and graphics (https://www.r-project.org/). This software offers a flexible means of data analysis and visualization. ZooMWest has developed a package in R (Zoolog) that quickly computes LSI values from measurements stored in CSV/Excel files. This approach has several advantages over analysis in Excel: 1. It is very fast, calculating thousands of log ratios in seconds. 2. It is very flexible - you can decide which bones and measurements (e.g. GL, Bd, SD) to include or exclude, and it is easy to change the standard and recalculate the log ratios. 3. R has excellent options for graphing and plotting data, making it easy to change how the data are grouped in periods and regions.





We hope that these advantages will help encourage the comparability of biometric data and facilitate comparisons between different regions and researchers, because it will take minutes (rather than days/weeks) to change the log ratio standard or graph/figure style.

Anyone who can use Excel can learn to calculate and graph log ratios in R. The training element of the workshop will take place over 3 days, which will include lots of personal attention and troubleshooting, so that participants are able to independently analyse their own data by the end of the week.

About the organisers - ZooMWest

ZoomWest - Zooarchaeology and Mobility in the Western Mediterranean: husbandry production from the Late Bronze Age to Late Antiquity - is an ERC project project combining zooarchaeology, isotopic chemistry, ancient DNA, and GIS to investigate changes in animal husbandry in several areas within the Western Mediterran. Find out more about the project on our website: ZooMWest.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