2023 INTIMATE Lecture series

Where land, ocean and ice meet...

Thursday, March 30th at 11am CEST - 9 am GMT

Human-environment

Hazel Reade (University College London)

The Late Glacial recolonisation of Britain: using faunal isotopes to bridge the gap between palaeoclimatology and archaeology

The recolonisation of Britain after the LGM appears to have been rapid, occurring against a backdrop of high-magnitude climatic and environmental change. There is debate about the precise conditions experienced by recolonising populations, and specifically whether people were present in Britain before, during, or after the onset of the Late Glacial Interstadial (LGI) warming that occurred ~14.7ka. Part of the difficulty in establishing the climatic context of recolonisation lies in our ability to reconcile differences in spatial and temporal resolutions offered by palaeoclimatic and archaeological archives. Oxygen isotope analysis of tooth enamel ($\delta^{18}O_{enamel}$) allows such challenges to be addressed because 1) in appropriate contexts $\delta^{18}O_{enamel}$ is determined by the $\delta^{18}O$ of meteoric water, which is directly linked to climate, 2) tooth enamel forms over several months to years, providing a record at a resolution relevant to the human experience, and 3) analysis of teeth bearing evidence of anthropogenic action provides climatic data directly ties to human presence. In this seminar I'll discuss horse $\delta^{18}O_{enamel}$ data from key Late Glacial archaeological sites in Britain. While results show that people were present in Britain prior to the LGI warming, the analysis also allows temporal and spatial differences between different sites and regions to be explored, with implications for our understanding of the Late Glacial British archaeological record.

Yannick Garcin (CEREGE-IRD, Aix en Provence)

Sedimentary cores help determine how vulnerable the central Congo peatlands are to climate change

The world's largest tropical peatland complex is in the central Congo Basin. Peat cores data indicate that a climate drying between 5,000 and 2,000 years ago triggered widespread decomposition of peat in the Congo Basin and emission of carbon into the atmosphere. If current carbon dioxide emissions led to climate-induced drying in the central Congo Basin, this would trigger the release of further carbon from peat to the atmosphere, creating a positive feedback in the global carbon cycle.

INTIMATE
Integrating ice core, marine and terrestrial records

Zoom link: https://tinyurl.com/y7r45pyy

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