Session #492

SCIENTISTS, SUBMITTERS AND SCROUNGERS: ALTERNATIVE VIEWS ON RADIOCARBON DATING IN ARCHAEOLOGY

Theme: assembling_archaeological_theory_and_the_archaeological_sciences
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Radiocarbon (14C) dating has become an essential tool in archaeology, but how do we handle results that do not match expectations? This session will focus on 14C ‘noise’ in the form of outliers, offsets and misfits, and how such noise is interpreted within the broader ‘radiocarbon community’. The radiocarbon community traditionally consisted of scientists whose research focussed on accurate measurement of 14C levels in different materials, including known-age samples used for 14C calibration. Archaeologists occasionally provided suitable reference materials, but generally acted as submitters of ‘unknowns’, whose calibrated 14C ages should constrain the chronologies of archaeological phenomena. Some submitters have developed close working relationships with laboratory scientists, and have taken an active interest in 14C basic research, while others have remained closely integrated in traditional archaeological research. In recent years, as the volume of published archaeological 14C data has grown, a third 14C ‘tribe’ has emerged: ‘scroungers’, whose research emphasises aggregating and re-interpreting existing 14C results, often looking for (spatial-)temporal patterns in archaeological phenomena. The proliferation of laboratory techniques and methods of statistical analysis, with attendant growth in our expectations of what radiocarbon dating can do for archaeology, mean that misunderstandings will inevitably arise. This session challenges participants to consider what each tribe in the wider 14C community can offer to and learn from the others. We invite papers on methodological approaches to identifying and handling 14C ‘noise’, and on its impact on archaeological chronologies.