

Charcoal & Wood Work Group Meeting

17 June 2012

Institute of Archaeology, University of Oxford

Attendees : Lucy Allott (ASE), Eleni Asouti (Uni of Liverpool), Danielle de Carle (Uni of Sheffield) , Gill Campbell (EH), Dana Challinor (Uni of Oxford), Shawn O'Donnell (Uni of Cambridge), Denise Druce (OA North), Allan Hall (Uni of York), Ceren Kabuckcu (Uni of Liverpool), Lisa Lodwick (Uni of Oxford), Lynne Lowrie (Northern Archaeological Associates), Don O'Meara (Wardell-Armstrong Archaeology), Julia Meen (OA South), Hengameh Ilkhani Mogadam (Uni of Nottingham), Liz Pearson (Worcestershire Archive and Archaeology Service), Jackeline Robertson (AOC archaeology), Mark Robinson (Uni of Oxford), Lisa Snape Kennedy (PCA), Karen Stewart (MOLAS), Robyn Veal (BSR), Angela Vitolo, Jade Whitlam (Uni of Reading)

The meeting began at 10am

DC welcomed everyone to the first CWWG meeting.

EA presented her ongoing research on charcoal from sites in central Anatolia and the application of various analytical such as fragment counting, ring curvature, ring width and fungal hyphae. Of particular note was EA's research on ring curvature, following a methodology similar to Marguerie & Hunot (2007). CK is to pursue such analysis as part of her ongoing PhD at Liverpool. EA commented that ring width count did not seem to provide new information and questioned whether such intensive methodology is worth the time.

RV added that she has conducted similar intensive quantification (ring curvature, width etc.) to material from Roman sites and found that there was patterning in larger fragments but not smaller.

EA spoke of looking into small scale impacts on wood through browsing, woodland management etc. Uses criteria for defoliation in conifers from Schweingruber 2007, for instance traumatic canals and deformed tracheids. EA intends to do further research on quantifying these features.

DC questioned the effect charring can have on such features. EA said it wasn't significant. RV commented weathering such as frost can also cause such affects in wood.

EA showed some interesting worked charcoal artefacts from Çatalhöyük and asked if anyone had studied the shrinkage of worked wood. RV commented that there is a 5-90% range of shrinkage in different sizes of wood. DC added it was also species dependent, RV commented on the importance of water content. EA mentioned the difficulty of seeing toolmarks on worked wood charcoal. RV advised that micro CT scanning can be useful for this.

RV and EA discussed the problems of separating fuel from burnt timber.

EA commented on the difficulties of tree equivalents from the quantification of charcoal fragments, but concluded that should 'count regardless'.

LP asked if stable isotope analysis can be applied to wood charcoal. EA replied that she is currently exploring such research, eg. Strontium isotope analysis.

DC presented on further methodological issues as raised by both EA and the 'French School' eg ring modeling. CK commented that some trees have baby growth rings (ie multiple sets of growth rings). RV added that there is a correlation between highly curved rings and young wood vs flat rings and mature wood. DC added the problem of subjectivity in the description of ring curvature. Some specialists, eg Rowena Gale have followed the approach of a rough description of the quantity of small and large wood.

A general discussion on fungal hyphae confirmed that the white hyphae commonly seen in charcoal are from modern fungi, but EA commented that she has seen charred hyphae in charcoal from Çatalhöyük.

DC raised the issue of vitrification. GC replied that we are still not sure what causes vitrification. Reflectance data says it is not caused by fire temperature, but we should still record when it occurs for future research.

DC mentioned on-line resources, including Wodan (international charcoal database), which provides a record of charcoal assemblages from sites, not just in Ireland.

RV raised the problem of charcoal storage and the problems of finding the same fragments in previously studied data. EA suggested gelatine capsules and GC small bags per fragment. AH commented that gelatine capsules will deteriorate over time.

MR added that we need to be pragmatic. Intensive analysis of some samples means less time can be spent on the assemblage as a whole. AH added the importance of conducting assessments.

DC raised the issue of quantification. DD said that full quantification is needed for important features such as kilns and cremations, but that for others such as ditch fill assessment level data would be fine. AE and RV both highlighted the importance of saturation curves to ensure enough fragments have been identified.

In the afternoon, a microscope session was held with several people bringing material. Final comments for the day included a general agreement to continue with the CWWG meetings, with provisional offers from LP for a visit to Worcester (autumn/winter 2012) and a meeting at Liverpool hosted by EA (2013). DC to set up a JISCmail group specifically for Archaeological Wood and Charcoal with the aim of including waterlogged wood and international specialists (see instructions below).

Minutes compiled by L Lodwick and D Challinor 1/7/2012

Websites and references

www.wodan.ie

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