

CONFERENCE REVIEWS

38th International Symposium on Archaeometry, University of South Florida, USA, 10th-14th May 2010

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Archaeometry is the use of scientific techniques to study archaeological materials and sites. The name 'archaeometry' was coined in the early 1950s when the discipline first began to flourish, and today encompasses a variety of activities including the identification and provenancing of materials used in the past, the reconstruction and exploration of technologies and their relationships, dating objects and sites, and geophysical prospection techniques.

The 38th International Symposium on Archaeometry was held at the University of South Florida, with 79 oral papers given sequentially over five days and 186 posters divided between two sessions. Emphasis was placed upon the posters, with scheduled sessions for viewing where presenters were expected to be available to answer questions and discuss their work.

This structure offered a great opportunity for graduate students to present and receive feedback, making the posters a valued part of the conference instead of a secondary adjunct. A number of the oral papers were also given by second or third year graduate students, and feedback at oral and poster presentations was both positive and democratic. Despite the potentially intimidating presence of a number of the more prolific and successful names in archaeometry the atmosphere was open and inclusive, and the conference was clearly designed to welcome both academics and graduate students.

In all there were ten oral presentation sessions, with papers of 15-20 minutes followed by questions from the floor. These walked a difficult line between focussing on particular approaches and looking at specific types of material, though the later type were the most successful. The largest session, *Stone, Plaster and Pigments*, was dominated by seven papers on pigment analysis in conjunction with one paper on plasters, and five papers on sourcing stone types. One of the most interesting papers was by Zvi C Koren of Shenkar College, Israel, on an HPLC-PDA study of Roman period purple dyes from a number of sites including Masada. Koren not only identified a range of purple dyes beyond the expensive but now famous ancient Tyrian Purple, but also matched the composition of an archaeological dye to the biblically described 'Blue Teklelet' dye, which has some interesting implications for biblical archaeology.

The once-popular session on *Field Archaeology* was limited to only three papers. This low number of papers was probably a result of the introduction of specific conferences for geophysical prospection techniques following the discipline's expansion. However

all three papers were of interest, and the paper by Arlen Chase, Diane Chase and John Weishampel on the application of LiDAR to an ancient Maya landscape was an extremely eloquent example of how scientific techniques, in this case funded by NASA, can produce extensive amounts of information on past landscapes in a swift and completely non-invasive manner. With just two days of LiDAR flight time the Chases were able to reveal tens of thousands of new terraces, thousands of new residential units, and eleven new causeways over almost 200 km² of land.

Despite a similar growth in dating techniques, the *Dating Methods* session was still a substantial size at seven papers and was predominantly focussed on the debates surrounding radiocarbon dating, including a thought-provoking paper by Jason Earle and Malcolm Wiener on the problems of radiocarbon dating in areas affected by the outgassing of ¹⁴C-deficient carbon from gas emission fields. The large number of papers in the *Metals and Metallurgical Ceramics* session was promising and showed a distinct lean towards studies of the early periods of metallurgy, which arguably represent one of the areas where scientific analysis can make the most impact in illuminating the origin of metallurgy and its early development.

The special session on *Isotopic Analysis of Human Skeletal Remains* was short at only six papers, but contained several particularly interesting presentations, including one by Janet Montgomery and colleagues presenting the analysis of enamel strontium isotope ratios in dental evidence from both the chariot and less formal burials of the Arras culture of Yorkshire. Whilst there was strong evidence that a group of men had migrated to the area from Europe, the team were unable to link them to any of the other areas where these chariot burials are known, throwing wide open the question of where this particular group had come from, with immediate and exciting implications for the wider archaeological community.

Ceramics and Glazes was the second most populous session, with many good papers including one by Marc Walton and colleagues which proposed a technique for identifying evidence of exposure to cremation fires on Attic white-ground lekythoi, particularly important considering the lack of context most of these museum pieces now have.

The last day was comprised of the *Glass and Vitreous Materials*, *Human-Environment Interactions* and *Integrated Site Studies* sessions. The former contained an intriguing paper by Laure Dussubieux, Maryse Blet-Lemarquand and Bernard Gratuze, giving evidence for the independent development of two distinct glass colouring technologies in South Asia and the Middle-East. The other two sessions were brief and the last lacked the punch that would have been ideal for a final session.

Attendees of the Symposium could not fail to be impressed by the wide chronological and geographical range of materials being studied by professionals from across the world, with good representation from Asia, the Middle East, the Balkans, Europe and the Americas. As the only truly international archaeometry conference, sitting within a

tradition of almost fifty years of annual or biennial symposia, more coherent opening and closing ceremonies might have been expected. In both cases there was no statement of the aims or intent of the symposium organisers, and no summary of the current situation in the discipline. Although some mention of the successes of archaeometry was made, there was no discussion of the challenges that doubtless face the discipline. The perspective of both attendees and organisers was inward looking, and with no key-note speeches at all the sessions lacked context even within the discipline of archaeometry.

This Symposium was organised by Robert Tykot, now Professor, who was also responsible for co-organising the rapprochement conference of 1995 entitled 'Science and Archaeology: Towards an Interdisciplinary Approach to Studying the Past.' It was therefore surprising that there were limited examples of 'interdisciplinary' work in the programme. Even the *Integrated site study* session appeared to be aimed at combining analytical approaches, rather than combining analytical work with more traditional archaeological approaches. This unfortunately echoes much of the criticism levelled at archaeological science in recent years from both archaeometrists (Henderson 2000; Pollard *et al.* 2007) and theorists (Jones 2002), complaining that both scientists and archaeologists do not speak in a language the other understands.

Very few of the presenters at this year's Symposium made the effort to generate 'cultural conclusions' from the data, and there was no demonstration of the reflexive disciplinary awareness that might be seen in other areas of archaeology. Considering that Dunne's now infamous 1993 article, describing archaeological science as 'sometimes interesting, largely irrelevant, and definitely optional,' received considerable positive response in the world of archaeology, including the aforementioned 1995 conference, it seems unfortunate that archaeometry may be returning towards a more inward looking approach.

It may be argued that the Symposium is not the ideal forum for a more interdisciplinary approach. Archaeometrists need a venue in which to present, share and explore their scientific work, and the Symposium fills that niche admirably. Certainly the attendees of this year's Symposium benefited greatly from a chance to freely discuss the most technical aspects of their work within an international community of relevant specialists without concern for making their work more accessible to a wider archaeological audience.

In the past the call has been for scientists to prove their work archaeologically relevant, but it can also be said today that archaeologists need to find more space within their work for the adoption, use and integration of scientific data. With archaeologists making efforts to attract archaeological scientists to more traditional conferences with interdisciplinary sessions such as the *More than Just Numbers? Science, Archaeology, and the Romans* session at this year's UK Roman Archaeology Conference, a similar move by the organisers of the Symposium to attract work of a more interdisciplinary nature could have been highly beneficial to improving the relationship between scientists

and archaeologists. In addition some engagement with current archaeological thought and its implications for archaeometrists, as seen before in the 1988 Symposium, would also have been fitting.

Much new research was presented within the individual sessions and will feature in the coming conference publication, but tradition seems to have weighed heavy and the opportunity to set this year's conference apart from the many previous Symposia in terms of reflection or engagement, either within the field of archaeometry or the wider archaeological community, was missed. However the Symposium should be seen within the light of the fantastic opportunity it offered for archaeometrists to come together in a friendly, open and extremely positive atmosphere to discuss their research and develop the collaborative relationships that are a vital part of this discipline. The research presented and the venue were of the high calibre expected for an international conference, and Prof Tykot and his team worked tirelessly to accommodate both the many different needs of the attendees and to organise the numerous cultural and social excursions that contributed to the relaxed and convivial feel of the conference.

References

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