**Report from the 12th ICOM-CC Wet Organic Archaeological Materials Conference (WOAM), 13-17 May 2013, Istanbul.**

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The 12th ICOM-CC WOAM conference, the triennial meeting of conservators and conservation scientists involved in the study and conservation of wet organic archaeological materials was hosted by Istanbul University, from 13-17 May 2013. Istanbul was chosen after the last conference primarily because of the remarkable discovery of no less than 36 boats in Istanbul's Yenikapı district, site of a Byzantine harbour, which were found during construction of a metro tunnel and station in 2004. Nearly all the boats have now been excavated and are being documented prior to conservation in the recently founded Dept. of Conservation of Marine Archaeological Objects, headed by Dr. Ufuk Kocabaş. Dr. Kocabaş and his efficient team of students and research associates were responsible for the local organization, and did an excellent job.

Due to the large number of abstracts submitted, the conference was extended by a day with a half-day session mid-week, followed by a study tour. Papers and poster presentations were divided into 10 thematic sessions as follows (see attached program for further details):

1. Management of Waterlogged Sites
2. Pre-Treatment Analysis and Assessment
3. Wood Treatments and the Sulfur Question
4. Yenikapı
5. Logboats
6. Conservation of Basketry, Bone, Tortoiseshell and Other Organics
7. Case Studies – Large Wooden Structures
8. Display and Storage
9. Drying
10. Snow Patch

The growing trend in *in situ* preservation has now become a standard theme in WOAM conferences, with focus on recreating an anoxic reburial environment, suitable long-term materials and methods to monitor sites over time. Foremost in this work are teams from Sweden and Denmark, but also Greece and Australia have carried out long-term studies in warmer, saltier waters. Dr. David Gregory, of the National Museum of Denmark, presented an EU-funded project called SASMAP, which is just starting in order to develop tools and techniques for survey, stabilization and monitoring underwater. Meanwhile colleagues from Greece presented their long-term investigations of the use of geo-textiles underwater. Preservation in situ sounds a promising alternative to raising and conservation, but it is important not to forget the long-term monitoring of sites. Costs of monitoring are often not as cheap as one might expect, depending on the ease of reaching and working on the reburial site.

Conservators have for a long time been searching for alternatives to polyethylene glycol (PEG) to impregnate archaeological wood, especially with current focus on reducing treatment times and costs. A promising material investigated by Nanna Pedersen of the National Museum of Denmark is mannitol, a sugar alcohol, which has a eutectic temperature of only -1°C (compared with PEG which must be frozen to -30 °C during the freeze drying process) and hence offers savings in time and

energy costs of treatment. In a related study, Kristiane Straetkvern (also National Museum of Denmark) reported on investigations into the technique of freeze-drying at atmospheric pressure (rather than under a vacuum) for which mannitol would be especially suitable.

There were many case studies of individual treatments, while a number of papers presented summaries of long-term projects. A potentially very useful study has been undertaken by Marcus Wittköpper (Römisch-Germanisches Zentralmuseum, Mainz, Germany) and his associates to collect and compare data on various treatments for waterlogged wood. Known as the KUR-Project, the collected data is now available on a website for those comfortable with German (see link below) and it is hoped that money is soon found for an English translation!

http://www.rgzm.de/kur/index.cfm?Layout=default&Content=start

One of the highlights of the week was the mid-week session on the Yenikapı ships, with a number of presentations from our Turkish hosts to set the scene, followed by a site visit to see the enormous hole where the ships were found. In many respects we visited four years too late as almost all the material has now been excavated, but we were shown the wet storage containers and site laboratory, where a Faro-Arm is being used to documents the timbers in 3-d using Rhinoceros software. The following day a trip to the well-equipped teaching laboratory was also arranged.

The program was very tight since almost 100 abstracts were submitted (more than any previous conference), and the planning committee of which I am a member wished to include as many presentations as possible. This meant that although time was given to questions, there was little opportunity for detailed discussion. On the final day, time was set aside for discussion of burning issues which had arisen during the week. The topic on most people's lips – especially as it is being used to treat one of the Yenikapı ships - was Kauramin, a material based on melamine formaldehyde, which now with a reduced formaldehyde component in its current formula, has come into favour especially in Germany over the last decade to impregnate waterlogged wood. While it offers many advantages over PEG-treatments, such as reduction in treatment time and therefore costs, there are still some major drawbacks, primarily, that it is not reversible and can cause damage to objects if inappropriately applied. This topic spurred heated discussion between Kauramin proponents and its detractors, although there were many in the meeting (the author included) who had not used it and are now very curious to experiment with it. Needless to say, the result of the Yenikapı ship being treated with Kauramin is eagerly awaited at the next conference!

This fact does raise an interesting dilemma for conservators today. One of the major sponsors of the conference was BASF, the German chemical company that manufactures Kauramin. One wonders how much the sponsorship factor affected the choice to use this material on the Yenikapı ship. In today's economic climate, conservators are under increasing pressure to consider sponsorship from chemical companies in order to be able to save the heritage we treasure, despite wishing to remain neutral and independent of industry forces and chemical manufacturers. Such a dilemma is especially acute when treating large objects such as boats.

A rather worrying trend noted by many participants was that a number of projects have been subjected to very strict time and financial restrictions, often to the detriment of the archaeological

find; boats being cut into sections both to speed up the excavation and to fit the size of the freeze-drier, rather than a freeze-drier being found to suit the dimensions of the boat. There was a feeling that too many compromises were being made in the care and treatment of finds in order to bend to pressure from local or state authorities.

Sweden was well represented at this conference, with seven presentations from Swedish authors from institutions such as Riksantikvarieämbetet (RAÄ), Göteborgs Universitet (GU), Sveriges landbruksuniversitet (SLU), Uppsala universitet, Statens maritima museer (SMM), ACTA Konservering and Studio Västsvensk Konservering (SVK), as well as attendees from Lund Universitets Historiska museum.

My own role within WOAM is as an Assistant Coordinator, as well as joint-author for a paper describing iron extraction techniques used on Vasa wood. I helped assess submitted abstracts and assisted with compiling the program and editing papers. I was to have chaired a session, but then was asked instead to present the paper from the Mary Rose Trust, as the author was unable to attend.

Unlike many large scientific conferences, there is a core group within WOAM who know each well, and so it is like meeting up with an extended family every three years. However, there are always newcomers and students with interesting new projects who contribute fresh ideas and discussion topics. As ever, it is the networking that goes on before and after the presentations and during the social program that is so beneficial at such events. One comes home inspired, energized and reconnected!

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