News in Conservation



The e-paper from the International Institute for Conservation of Historic and Artistic Works

Sweden's Vasa deteriorating faster than expected



The Vasa, Vasamuseet, Stockholm, Sweden

STOCKHOLM - The Vasa, Sweden's most famous warship, is deteriorating at a faster rate then expected as shown by new research data.

In a statement released earlier this month (September 2012), Lars Berglund, a professor at the Wallenberg Wood Science Centre at Stockholm's Royal Institute of Technology (KTH) said: "Our research shows that the strength of the wood has fallen dramatically. We didn't know this previously".

Berglund's team has analysed the strength of the wood to determine the effects of a treatment performed on the Vasa back in 1961 when it was lifted out of Stockholm's harbour.

The treatment is based on the use of polyethylene glycol (PEG), which is sprayed on the wood and has been widely used in the past to treat waterlogged artifacts. The team is looking at the effects of iron from metal parts from the ship in combination with sulphur from decaying bacteria.

Issue 32, October 2012

IIC 2012 Vienna Congress

Maria Gruber sent us her report complete with images.

Feature on page 12-13

Conservation in the jungle

Discover The SAHI-Uaxactún Conservation Project. Teresa Navarro Gomez talks to NiC about the work of the conservation team in Guatemala. Feature on page 6-9

9th International Conference of Conservation-Restoration Programmes in Croatia

Sagita Mirjam Sunara gives us an in-depth report on page 10-11

Cleaning of painted surfaces

Latest techniques explained by Rebecca Pavitt.

Full feature on page 14-15

www.iiconservation.org

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The dramatic results of the research showed that the structure of the Vasa has only on average 50% of its strength compared to the time it was recovered and that the decision of letting the wood dry encouraged a reaction between the iron components and the oxygen, further weakening the ship.

Professor Berglund added that the first step was now to figure out how fast the breakdown process is happening and to do a qualified risk assessment. By understanding exactly how Vasa's wooden structure is deteriorating it will be possible to devise a strategy for its conservation.

The Vasa sank on its maiden voyage in 1628; commissioned by Swedish King Gustavus Adolphus, it was built as a warship to be employed in the *Thirty Years' War*. Most of its bronze cannons were salvaged in the 17th century but it was only in 1961 that the almost intact ship was raised from the Stockholm's arbour and housed in a purpose-built museum.

Ruben's *Triumph of the Eucharist* will be conserved with award from Getty Foundation



Triumph of the Eucharist over Idolatry, Peter Paul Rubens, 1625-6, oil on panel. Museo Nacional del Prado, Madrid

The Getty Foundation has awarded nearly US\$390,000 (£240000) to the Museo Nacional del Prado for the intricate conservation of a series of six panel paintings by Peter Paul Rubens known as the *Triumph of the Eucharist* – one of the most important commissions of Rubens' lifetime. The grant is part of the Getty's ongoing Panel Painting Initiative, an international effort to train conservation specialists to ensure that important works of art on panels survive for future generations. A previous collaboration with the Prado under the Getty's Panel Paintings Initiative resulted in the conservation of Prado's *Adam and Eve*. The Getty Foundation, Getty Conservation Institute, and J. Paul Getty Museum together launched the Panel Paintings Initiative in

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Editorial

A very warm welcome to the October issue of *News in Conservation*.

This autumn has been ever so hectic and action-packed with the conclusion of the 2012 IIC Vienna Congress, described by many as a great success.

Maria Gruber has put together the highlights from the Congress and sent us an impressive collection of images many of which we have already published on our Facebook page. The Congress report can be seen on page 12 and 13 of this issue, but as ever NiC wants your contribution - if you were there and want to share your highlights, with us please write!

In this issue we take a very exotic look at what has been going on in the Petén Jungle of Guatemala, courtesy of Teresa Navarro Gomez. Teresa talks about the SAHI-Uaxactún Conservation project and her work as part of the team involved in the conservation of this remarkable Mayan site.

True to our commitment to showcasing students and young professionals at work, we invited Sagita Mirjam Sunara to talk about the 9th International Conference of Conservation-Restoration Programmes, that takes place annually in Croatia.

Paper and textile conservator Rebecca Pavitt, talks about cleaning painted surfaces using methods and materials she learned about during a workshop she attended in 2012 at Vancouver Art Gallery in Vancouver, Canada.

That's nearly all from me; I just wanted to give a big thank you to all our contributors, readers and FB followers for their continuous support and encouragement. In the world of conservation *NiC* is a great resource thanks to the quality of the contributions that you sent us, so keep them coming!

Barbara Borghese Editor >>

2008 to ensure that the next generation of conservators is prepared to take their place. The initiative is a six-year effort to train and mentor the next generation of panel paintings conservators. Due to the urgency of the situation, the current leaders in the field have also committed themselves to aid in the training of up-and-coming conservators in the field.

The Panel Paintings Initiative builds on the Getty's long involvement with issues in panel paintings. For more than fifteen years, the Getty Conservation Institute and J. Paul Getty Museum have taken a leading role in panel paintings conservation, convening practitioners in two major international symposia and disseminating proceedings that stands as the most

comprehensive literature on the topic.

Understanding the pressing need for skilled conservators, Prado will use the conservation of Rubens' important panel paintings as a major opportunity for training. Over two years, seven conservators at various stages of their careers will receive advanced training: one conservator and four midcareer conservators will work on the project for periods of time ranging from two to six weeks, and two postgraduates would each have a year-long residency at the Prado, working on the Rubens panels as well as other projects.





Adam and Eve by Albrecht Dürer (1507), Prado Museum. Madrid

The more seasoned conservators will gain experience on the challenging parts of the treatment as it progresses, while the more junior conservators will learn the basic skills to treat splits, cracks, and other structural problems. All trainees will benefit from observing the complex decision-making process involving conservators, curators, and conservation scientists. The project will be led by Prado conservator José de la Fuente, who himself benefitted from previous training under the Getty's Panel Paintings initiative. The Metropolitan Museum of Art's conservator George Bisacca will consult on the project.

Previous grants have funded a survey of significant museum collections of panel paintings and of professionals in the field undertaken by the Statens Museum for Kunst in Copenhagen, a collaborative project between the Metropolitan Museum of Art in New York and the Prado Museum in Madrid that resulted in the conservation of Dürer's Adam and Eve, as well as the conservation of The Mystic Lamb by Hubert and Jan van Eyck (the Ghent Altarpiece) of 1432 and The Last Supper by Giorgio Vasari of 1546, all highly significant works of art.

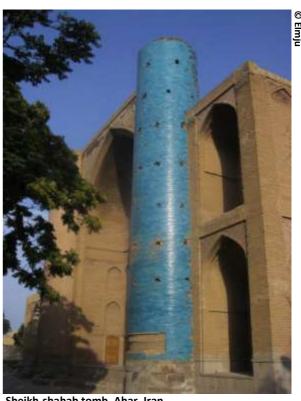
News in Brief...

Earthquakes in northwest Iran damage historical buildings

TEHRAN - A number of historical monuments have been damaged after two powerful earthquakes rocked the cities of Ahar and Varzagan in northwest Iran. After a first assessment of the situation, cultural heritage experts have confirmed that the roof of Sheikh Shahabeddin Ahari's tomb, and the Qasem Khan Ahari's house, a building from the Qajar era (18th century), have both sustained heavy damage.

In a village near the city of Varzaguan the tremor also caused structural damage to the Amir Arshad House, another monument from the Qajar era. Torab Mohammadi, head of Iran's East Azarbaijan Cultural Heritage Office said in a statement released to local press that although the area has been heavily hit, the damage was less than initially feared.

Iran is located on several seismic fault lines and is prone to earthquakes, experiencing at least one small tremor per day on average.



Sheikh-shahab tomb, Ahar, Iran



Temple of Aphaia, Aegina, Greece

Greece heritage sites in danger from spending cuts

ATHENS - The economic and political instability in Greece is jeopardising the country's economic future and also having a devastating impact on the country's rich cultural heritage, according to archaeologists in Athens.

In a recent statement, the Association of Archaeologists warned that economic policies favoured by the European Union and the International Monetary Fund would result in "the destruction of both our country and our cultural heritage". austerity measures intended government debt have forced the state-run archaeological service to slash staff numbers by more than 10%, with a further 35-50% reduction possible in the near future. Research and excavations are being abandoned, while museums can no longer afford to pay for

security and are left vulnerable to attacks by armed robbers. The threat of organised criminals exploiting this situation is resuting in a proliferation of illegal digs which benefit the illicit trafficking of antiquities.

>>

The European Commission denies that spending cuts are to blame. "Greece has received very large sums that go towards cultural heritage. Many cultural institutions have been saved in Greece because of the work of the European Union, but there are limits to what we can do. The main responsibility lies with the states", says Dennis Abbott, spokesman for Androulla Vassiliou, European Commissioner for culture and education.

Europeana's cultural dataset opens for re-use

Opportunities for application developers, designers and other digital innovators will be boosted as the digital portal *Europeana* opens up its dataset of over 20 million cultural objects for free re-use.

The massive dataset is the descriptive information about Europe's digitised treasures. For the first time, the metadata is released under the *Creative Commons CCO Public Domain Dedication*, meaning that anyone can use the data for any purpose - creative, educational, commercial - with no restrictions. This release, which is by far the largest one-time dedication of cultural data to the public domain using CCO offers a new boost to the digital economy, providing electronic entrepreneurs with opportunities to create innovative apps and games for tablets and smartphones and to create new web services and portals.



Portrait of Jacob Maris at the Age of Twenty, Rijksmuseum, Amsterdam

Europeana's move to CCO is a step change in open data access. Releasing data from across the memory organisations of every EU country sets an important new international precedent, a decisive move away from the world of closed and controlled data.

Importantly, the change represents a valuable contribution to the European Commission's agenda to drive growth through digital innovation. Online open data is a core resource, which can fuel enterprise and create opportunities for millions of people working in Europe's cultural and creative industries. The sector represents 3.3% of EU GDP and is worth over €150 billion in exports.

Welcoming the announcement, Neelie Kroes, Vice-President of the European Commission with responsibility for the Digital Agenda for Europe, said: "Open data is such a powerful idea, and Europeana is such a cultural asset, that only good things can result from the marriage of the two. People often speak about closing the digital divide and opening up culture to new audiences but very few can claim such a big contribution to those efforts as *Europeana's* shift to creative commons."

The *Europeana* platform and network of experts facilitate research and knowledge exchange between librarians, curators and archivists, and link them with digital innovators and the creative industries.

Europeana - www.europeana.eu - is Europe's digital library, archive and museum. It currently gives people access to over 20 million books, paintings, films, recordings, photographs and archival records in 29 languages.

European Union Prize for Cultural Heritage – Europa Nostra Awards 2013

Each year, Europa Nostra and the European Union reward the best of cultural heritage achievements. The European Union Prize for Cultural Heritage / Europa Nostra Awards, aim to celebrate excellence and dedication by architects, craftsmen, volunteers, schools, local communities, heritage owners and media. The awards celebrate exemplary restorations and initiatives of the many facets of Europe's cultural heritage in four categories. Every year, up to six monetary awards of €10,000 each are awarded to the top laureates in the various categories.

For more information visit http://europanostra.org/

Conservation in the jungle - The SAHI-Uaxactún Conservation project



Teresa Navarro Gomez

Uaxactún was the first Mayan site explored within the Petén jungle in Guatemala. It was discovered by Sylvanus Morley in 1916, earlier than the famous city of Tikal, which is located only 23km to the South.



View of the ruins of Uaxactun, one of the pyramids belonging to the group H-North

The investigation started thanks to the Carnegie Institute in Washington, USA, which carried out an extensive research in Uaxactun in the 1920s, 30s and 40s, under the direction of Ledyard Smith, who discovered the site in 1916 together with Sylvanus Morley. In the 1970s the research was taken over by University of Pennsylvania and in the 1980s by local researchers. These research activities contributed to Uaxactun being defined as one of the oldest Maya cultural centres and the place where to an exceptional degree, Pre-classic astronomy and the Classic palace architecture was developed. Moreover, beautiful Early Classic murals were discovered at the site together with fascinating stucco masks and decorations. For the next 20 years however, Uaxactun remained abandoned and several important areas, which previous teams had not reached, were left unexplored.

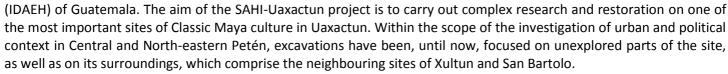
The opportunity to finish the research on this extraordinary Mayan site and to make the most of the exceptionally rare chance of complex processing of this important Mayan centre was at last seized (from 2009) by the Slovak Archaeological and Historical Institute (SAHI), under the direction of Milan Kováč.

The research, which has since been completed, showed entirely new contexts especially regarding the Pre-classic occupation of Uaxactun. Research findings also helped, to a considerable degree, to complete the picture of the Classic Period, as well as the establishment of the geographical, historical and political significance of the city.

In the vicinity of the ruins lies the modern village of Uaxactun, one of the most isolated in Guatemala. This village, where the project's campsite is located during the excavation and conservation campaigns, was founded as a chicle (chewing gum) sap collectors' settlement during the first half of the 20th century. In 1982, Guatemala's Tikal National Park was expanded to include the ruins of Uaxactun within its protected area, and in 1990 the Maya Biosphere Reserve (MBR) was created, including Uaxactun as a part of the reserve's Multiple Use Zone.

The organization and management

The SAHI-Uaxactun archaeological project is a SAHI project carried out in co-operation with the Instituto de Arqueología e Historia



The team comprises professionals from different fields and nationalities; Dr. Milan Kováč, from Slovakia, is the head of the SAHI project working in collaboration with Dr. Ernesto Arredondo (co-director) from Guatemala. They have worked together from the beginning of the project in 2009.

The direction of the conservation team has fallen, since 2011, on Alice Desprat, of French nationality, under whose directions I was lucky enough to work together with other three Spanish conservators and two French conservation students. In addition, the team includes archaeologists, prospectors, epigraphists and anthropologists who can guarantee exhaustive research of the findings is carried out.



The Jaguar Underworld god from mask-N



The conservation team at work

The masks

The masks on which last campaign's conservation work was focussed (March-May, 2011) are included in an archaeological group known as group H-North belonging to the Pre-classical period.

This group comprises three structures or pyramids placed on a square-shaped platform. At the corners of this platform four more secondary structures are located. Due to the orientation of the group, archaeologists believe it to have been an astronomical observatory associated with the Orion constellation and the Summer solstice. This complex was studied in 2010 and 2011, but the main discovery was made by archaeologist Edy Barrios, who discovered the huge stucco masks flanking the monumental staircase that lead to the above-mentioned platform.

These masks are massive reliefs made of stucco (a lime mortar) over a limestone structure, outlined with the basic shapes representing Mayan deities. In this particular case, the god represented is still unknown, although

in all probability it is the Underworld's Jaguar god - embodying the night sun. The importance of the masks lays on the fact that, each of them being 20 meters long, they constitute one of the biggest ever found, not only in Uaxactun, but in the entire Mayan world.



The Jaguar Underworld god from mask-N

Condition

Considering the age of the masks - around 2,150 years old - and the weather conditions in which they have been, in the subsoil of a tropical jungle - it may be said the masks were in fairly good condition before the intervention.

At the time when they were erected, the masks were coloured, although only traces remain in areas that have escaped damage. They can be compared to the masks found at the group H-South in the 80's, which, at the time of their discovery, still maintained the vast majority of their polychromy, in ochre, red and black colours. This allows us to imagine the original appearance of the masks and, to a certain degree to quantify the damage they have suffered in the 1980s.

One of the main deterioration agents to which the masks have been subjected to is the effect of vegetation. Large trees grew over the masks inserting their roots deep into the stones of the masks' structures and between the structures and the layers of stucco that covered them. This caused a great deal of loss, displacement and deformation in the volumes of the masks. The felling of the trees, necessary for the excavation, resulted in the rotting and decomposition of these roots. This in turn caused the collapse of the fragments they previously and precariously held on to, and displaced the masks from their original location.

The abundance of rainfall during the rainy season is, perhaps, the other main deterioration agent. Rain has two different effects: on the one hand, water dissolves the most soluble components of rocks and mortars; in the case of mortars, water is to blame for the loss of polychromy. In the case of the limestone that constitutes the structure, water causes alveoli or holes of considerable dimensions, by dissolving the soluble compounds and nodules found in the insoluble carbonated matrix, thus affecting its mechanical resistance. Additionally, intense rainfall has washed away soil compounds with an alkaline pH, making it more acidic. This acidity activates the breakdown of carbonate materials such as limestone and lime mortars turning them frail and brittle.

Finally, excavation and previous conservation works have had their influence on the masks' condition. It is often underestimated how traumatic unearthing is for archaeological objects, with the change from an underground environment to an aerial one, and the addition of extraneous substances during conservation processes. In the case of

these masks, they have not been completely dug up in every excavation campaign, a fact that probably favoured their preservation. Besides, from the first reburial they were protected with a geotextile before being covered with soil.

Conservation

In 2012 the conservation team led by Alice Desprat was composed of six volunteer workers including myself, two French students and four Spanish objects conservators who had recently graduated from school. This team was formed thanks to the contacts established between Alice Desprat and our respective Conservation schools.

During the two years Alice has been the head of the conservation project, the prevailing intervention criteria were based on minimum



The conservation team working on the site

intervention and the use of inorganic materials, perfectly compatible with the originals and adequate for the environment in which the masks are found. Moreover, she started a collaboration project with the Chemistry Department of the University of Florence to explore new consolidation and cleaning methods based on the use of microemulsions specially adapted to the problems of porous materials.

Due to the consolidation requirements of the masks in tropical climate conditions - Petén is a tropical jungle - and the availability of products in the area, the materials used for the conservation of the masks were:

- lime, handcrafted from limestone,
- sascab, a kind of soil, also calcareous and extracted from local quarries, probably used for construction by the Mayans themselves,
- coarse gravels and sands industrially ground.

Consolidation and volumetric reintegration were carried out with these few materials, whereas cleaning was purely mechanical. Consolidation was approached from two different angles. Brittle mortars were impregnated with limewater, perfectly compatible with the original materials. Unstable or detached fragments were attached with lime mortars, filling-in the cracks and reconstructing in order to stabilise the area.

Reintegration was kept to a minimum, limited to areas where it was essential for its stabilization or where it could have meant a significant improvement in the legibility of the masks. Again, this treatment was carried out with lime mortars containing gravel or sand, depending on the texture required for the



The conservation team

finishing. Coarse texture was used in the reintegration of the general volumes carved on the structure stones, while a finer texture was assigned to the stuccos reintegration. Reintegration was left on a level below that of the original in order to differentiate it from the original.

Future plans

Conservation and excavation campaigns are expected to continue in the near future. As for the masks, the conservation work was terminated at the end of 2012; the masks were protected with a geotextile and reburied for preservation reasons. However, the possibility of a replica of the masks is being considered. These replicas would be made using 3D models of the masks that would reproduce them on a 1 to 1 scale. They would be placed over the soil that covers the actual masks, flanking the staircase and would help visitors to get a more accurate idea of the monumentality of the complex.



Teresa Navarro Gómez is a Spanish objects and sculpture conservator. She studied Fine Arts at the Universidad Complutense of Madrid, where she specialised in Sculpture conservation. She then started a degree in objects conservation at the Escuela de Conservación y restauración de Bienes Culturales, also in Madrid. After finishing her studies, she obtained a one-year internship at the Antiquities Conservation Department at the J. Paul Getty Museum in Los Angeles. In the field of archaeological objects conservation, she has worked in several sites in Spain and most recently in Guatemala.

9th International Conference of Conservation-Restoration Programmes, Croatia

Sagita Mirjam Sunara

The Arts Academy of the University of Split, Croatia, hosted the 9^{th} International Conference of Conservation-Restoration Programs in April 2012. The two-day conference included 14 lectures, a student poster exhibition and a roundtable discussion. Three Croatian and one Slovenian school participated in the event.



The conference's participants

History of the conference

The first such conference was organized in Split in 2004. At that time, Croatia had two graduate programmes in conservation-restoration: one at the Arts Academy of the University of Split and the other at the Academy of Fine Arts of the University of Zagreb. The conference aimed at bringing together students from these two schools to showcase their work. The teachers also benefited from this event, as it provided them with the opportunity to share experiences and discuss how programmes could be improved. In 2006 the newly established programme at the University of Dubrovnik joined the project. With the inclusion of the Academy of Fine Arts and Design from Ljubljana in 2007, the project achieved an international character.

The conference is held annually, each time at a different Croatian university (Split, Zagreb or Dubrovnik). Four students or recent graduates represent each programme. The topics of their lectures vary from preventive conservation and technical studies to complex conservation-restoration treatments. Students usually present the projects that they took part in during the previous academic year. The official languages of the conference are Croat and English, and students can choose in which language they want to present their papers. All lectures are open to the public.

So far, the papers presented at the conference have neither been collected or published. This year, the organising committee, headed by the author of this article, decided to launch a conference website and to publish all materials online. These are now available at the following link: www.konferencija-restauracija.com. The website is in Croat, but the abstracts of students' papers are available in English.

Awarded students

At this year's conference, thirty-four students from the universities of Ljubljana, Zagreb, Dubrovnik and Split presented the results of their scientific and practical work. There were 14 lectures and 10 posters. The organising committee introduced the award for the best oral presentation, the best *PowerPoint* presentation and the best poster. The award was named after Zvonimir Wyroubal (1900-1990), who is considered the founder of the *Conservation-Restoration Service* in Croatia.

Martina Tekavec, a recent graduate of the University of Ljubljana, received the Zvonimir Wyroubal Award for the best oral presentation.



One of the posters

Martina talked about a 15th century polychrome wooden sculpture that was vandalized in the 1950sand following this attack, large portions of the sculpture were reconstructed, but the original appearance was not respected in every detail; recently, conservator-restorers had to re-evaluate this treatment and to decide on its future. Elena Jurić, a recent graduate of the Arts Academy of the University of Split, received an award for the presentation on the conservation and restoration of a 17th century wooden polychrome *antependium* from a small church in the Dalmatian hinterlands. This project is a part of a wider effort to restore the original inventory of the contents that church, which were removed during a renovation thirty years ago. The Zvonimir Wyroubal Award for best poster was given to Nataša Treursić from the University of Dubrovnik; Nataša presented a poster "Felkl's Globe with the Representation of Earth from the Maritime Museum in Dubrovnik: Diagnostic Research and Conservation-Restoration Treatment".

Professional accreditation of conservator-restorers in Croatia

A round table discussion "Conservator-restorers: What to do after the diploma?" generated a great deal of interest among conference participants. Panellists included graduates of the conservation-restoration programme in Split, the director of the Split City Museum, a representative of the Croatian Employment Service and a representative of the City Municipality. One of the topics the panellists discussed was the professional accreditation of conservator-restorers in Croatia. Although the country has three graduate programmes in conservation-restoration, a diploma in this field is not needed to attain the accreditation. Conservator-restorers can have any diploma and twoyears of work experience (one, if they worked in a museum). Obtaining work experience is one of the greatest challenges emerging conservators face, as institutions lack the money to hire new people. The inspiration for this round table discussion came from the Student and Emerging Conservator Conference "Conservation: Futures and Responsibilities" that was held in September 2011 in London, and organized by the IIC.

Conservator-restorers at work

As a part of the conference, a visit to the conservation-restoration studios of the Arts Academy of the University of Split was organized. This was an opportunity for the participants, and for the general public, to get a behind-the-scene look at how students treat valuable artworks.



Sagita Mirjam Sunara Sagita Mirjam Sunara is an assistant professor at the Conservation-Restoration Department of the Arts Academy, University of Split (Croatia). She obtained a diploma in conservation-restoration of easel paintings and polychrome wood in 2005 and is currently pursuing a Ph.D. in Art History at the Faculty of Philosophy in Zagreb. She teaches easel painting conservation, preventive conservation and documentation techniques in conservation. Sagita worked for five years as a documentarist at the Croatian Conservation Institute in Split, Section for Stone Sculpture. She authored three exhibitions on the conservation of the Peristyle of Diocletian's Palace in Split, and presented that project at numerous professional meetings. Public outreach for conservation is one of her greatest passions.

IIC News

Highlights of the IIC 2012 Vienna Congress – a great success!

report by Maria Gruber



The opening ceremony

The IIC 2012 Vienna Cngress was held in Vienna, Austria on 10-14 September 2012. The congress was opened by Claudia Schmied, Austria's Federal Minister for Education, the Arts and Culture, Gerald Bast, President of the University of Applied Arts Vienna, the official local organiser of the congress, and IIC President Jerry Podany. The opening speeches were serious and profound as well as authentic and personal, which marked the direction and set the tone of the congress.

The paper and poster sessions

The engaged paper presentations illustrated the high standards of the peer-review process that preceded the selection and the high level of professionality and competence of the IIC conservation community. The themes of the paper sessions expanded the Congress topic to its many thematic aspects and perspectives. Posters were hung prominently throughout the congress week. The poster session on Thursday morning was dedicated to poster presenters and gave participants the opportunity to get acquanted with the topics displayed.

"The 2012 IIC Vienna Congress was indeed a wonderful experience, I've met very interesting people and learn a lot! The tours were a great opportunity to know better the Wien Museum and the Abbey of Klosterneuburg in Lower Austria. Congratulations for the success of the event!"

Daniela Coelho via IIC Facebook page

The evening receptions

The Kunshistorisches Museum hosted a marvellous evening and proved a fantastic venue for the opening reception. Participants were treated to a rare closer look at Gustav Klimt's wallpaintings located on the museum staircase and enjoy the unique atmosphere of the Museum's Kuppelhalle. At the end of the Congress, the Museum of Applied Arts Vienna hosted the farewell reception – another successful evening in theme with the Congress topic. Guests were again treated with both an historic and a very modern perpective on the world of decorative art, as noted by museum director Christoph Thun Hohenstein.

The Mayor of the city of Vienna, Michael Häupl hosted a Grand Dinner in the palatial Wappensäle suite at the Vienna Rathaus; though the Mayor could not be present at the event, the Grand Dinner turned out to be an unforgettable evening with lively conversations, opportunities to meet old acquaintances and make new firends, nice food and drinks and relaxed dancing to the charming dinner band music.

The meetings

As in previous years, the Congress included a series of meetings of IIC delegates in Vienna – all of them with forward-looking results. There was a meeting organised for IIC Grants recipients that brought together those participants from all over the world supported by the award. The Fellows Meeting included senior members of the conservation profession and was an opportunity to meet in person those Fellows that have not had the opportunity to meet before. During the Regional Groups Meeting, representatives gave an update on their recent group activities. Special focus was put on the consequences for cultural property in the aftermath of the dramatic earthquake and tsunami

disaster that took place in Japan in 2011. The Students Delegates Meeting followed on from the success of the meeting held in Istanbul during the last IIC Congress and showed the growing relevance of the IIC students network.

The excursions and Round Table day

Wednesday was dedicated to excursions and the attendance was exceptional. In the morning participants could choose between a wide range of backstage tours that gave insight into very special conservation venues and sites. The Secession and the walk along the Wiental was just one highlight of the day. In the afternoon the Abbey of



Klosterneuburg opened its doors for guided tours of the historic monument and was theatre of a lot of discussions on diverse conservation issues. Later, the Round Table "Not Your Grandmother's Chair" also took place in Klosterneuburg Abbey, but due to the live stream on the IIC website it was not restricted to congress participants but invited professionals from all over the world to join in the discussion.

"That was just a great week, Vienna 2012. I'm taking that thought from Wednesday evening, reflected throughout the week, that Matter has many meanings! Thanks everyone for a memorable congress". Hajah Tetley via Facebook

Reviews

Cleaning of Painted Surfaces - Wolbers Strikes Again! A Workshop Review

Rebecca Pavitt

In March 2012, the Vancouver Art Gallery in Vancouver, B.C. Canada, hosted a three-day workshop titled 'Cleaning of Painted Surfaces', given by Richard Wolbers, Associate Professor of Science and Paintings Conservation at the University of Delaware's Winterthur Art Conservation Training Program.

At the Vancouver Art Gallery workshop, participants received the benefit of Richard Wolbers latest research, including the use of gels, rigid gels, silicone emulsions and a new (to conservation) solvent of extremely low polarity. The following is a summary of this workshop, from a paper conservator's point of view.

Mornings were spent at lecture, and afternoons in the lab, testing the materials on items brought in by class participants. The first day was spent reviewing basic cleaning chemistry: pH, buffers, conductivity and surfactants. As a paper conservator trained in the 80's, some of the concepts were familiar to me, and some were not.

Ph as the measurement of an aqueous solution's acidity or alkalinity is, of course, standard knowledge to paper people. But the consideration of conductivity and how it applies to a solution's ability to clean was



A demonstration during the workshop

new to me. The ability of a material to conduct electric current is related to the concentration of ions in solution. Every material has some amount of ionic compounds on its surface and, in the case of porous materials such as paper and textiles, within its body. This can be measured by taking samples (wicked from the item being tested by small pieces of dampened filter paper or rigid agarose gel) and using a hand held micro conductivity meter.

A hypotonic solution such as de-ionized water has conductivity less than that of the item being cleaned. It will draw ions out of the material being cleaned, and drive water in (swelling). This will clean the material, but if the difference in conductivity is too great, damage can occur. In the case of acrylic paint for example, the top of the paint layer can be blown off. An isotonic solution, where the conductivity of the cleaning solution matches the conductivity of the material being cleaned, is safe, but does not have much cleaning power. A hypertonic solution, where the conductivity of the cleaning solution is greater than the substrate, will push ions into the substrate and draw water out (shrinking). Unless one actually wants to put ions into the substrate, as in the case of depositing an alkaline reserve in paper, hypertonic solutions would be used with caution.

By knowing the conductivity of the material to be cleaned, solutions can be designed to maximize cleaning while minimizing the potential for damage.

As a general rule, a cleaning solution should not, for safety's sake, be more than 10 times the conductivity of the item being cleaned, and much less is often quite effective. Ionic material that can be added to the solutions include, but are not limited to, buffers, chelators, and surfactants. The types and properties of buffers, chelators and surfactants commonly used in conservation were reviewed.

Day two covered gel delivery systems for aqueous solutions and solvents, with the focus on xanthan gum, agarose, Pemulen TR2, and Velvesil Plus. A water solution of xanthan gum (2% w/v) and triethanolamine (TEA) (5% v/v) forms a viscous, pH 8.5% gel that is stable over a wide pH and temperature range. Additional materials can be added to make custom cleaning poultices. Oxidizing agents, such as bleach, and most cationic materials, such as ammonia, cannot be used as they cause the gel to collapse. Xanthan gum gels can also hold non-polar solvents in intermolecular pockets (oil in water emulsion), a property which has the potential to greatly reduce the conservator's exposure to solvent. These gels rinse well making them suitable for use on paper and textiles.

Agarose (purified agar) is most useful when used as a rigid gel (about 4% w/v in water). In this case it can be used as a molecular sponge both to deliver solutions to, and withdraw solutions from, the substrate. Polar solvent gels can be made from agarose gels by immersing them in acetone or ethanol, where the solvent molecules exchange with water molecules in the gel. The resulting gels can be used to soften some types of adhesive, or weaken solvent soluble materials from the substrate.

Pemulen TR2 is an alkyl acrylate cross polymer that can be used to make oil in water emulsions. Organic solvents can be added up to about 20% v/v. A gel made from 1.0% w/v Pemulen TR2 in water with 5% TEA gives gel with pH 8.5; the same gel made with 1% TEA has a pH of 6.5. Below pH 6 the gel collapses into slime. Because of rinsing issues, Pemulen gels are not recommended for porous materials. Xanthan gum gels are a better choice for paper and textiles that can be washed, and rigid agarose gels for water sensitive items.

The final gel to be covered was Velvesil Plus, a real showstopper. It is a silicone polyether co-polymer, that can be mixed with both polar solvents (including aqueous solutions) and non-polar solvents, up to about 20% each. This very unique gel is a thick, non-polar, waxy gel that can be painted on small areas with great precision. It can be used a type of "dry" poultice, delivering (and then removing) tiny amounts of water, or aqueous solutions to water sensitive items, such as parchment and acrylic paintings. It can also be used to draw out solvent soluble materials, such as ballpoint pen marks, even from solvent sensitive surfaces. Velvesil Plus can also be used as a mask to protect water sensitive media in the manner of cyclododecane. It is certainly more easily applied than cyclodocecane, but as always, testing is need to make sure application and removal do not disturb sensitive media. Velvesil Plus is removed with cyclomethicone a solvent with such low polarity that it is right off the lower right corner of the Teas diagram. (Cyclomethicone can also be used as a mask by itself, depending on the particulars of the piece being treated). In theory, cyclomethicone has such low polarity that it cannot cause unwanted solubility problems, but should still be tested before using. (I found that it did leave a very light tideline in an aged brown dyed paper). One also needs to remember that the mechanical action of application and removal could damage fragile media.

Day three-covered solvent based Carbopol gels, and a review of the Teas diagram. Wolbers is actually moving away from these solvent gels, feeling that most cleaning can be done using the above-mentioned gels and solutions. His health and safety goal is to drastically reduce the amount of organic solvents used in conservation, and to substitute the most toxic solvents with safer alternatives. Benzyl alcohol, for example, can be mixed with mineral spirits to approximate the solubility parameters of xylene. His goal as far as treatments are concerned is to simplify the process by reducing the number of chemicals and delivery methods needed.

The materials used in the workshop are, with one exception, available from chemical suppliers, and web-stores catering to small-scale producers of personal care items and cosmetics. As a paper conservator who would use large amounts of the very expensive agarose powder, I chose to experiment with plain food grade agar and this seems to be an acceptable substitution. Unfortunately, Velvesil Plus is a special order item, available only, at the time of writing this review, in 350 lb. lots, with a total cost of US\$10,000 (£6200).

The workshop was an extremely worthwhile event, inspiring me to re-tool my lab, and start experimenting with this brave new World of Wolbers. I thank the conservation staff of the VAG, and Nadine Powers for organizing this event; it was a true inspiration to this "a bit past mid career" conservator.



Rebecca Pavitt has been a conservator in private practice since 1987, specializing in paper and flat textiles. She is a graduate of the Buffalo State College Art Conservation Program in NY, and a member of the Canadian Association of Professional Conservators. Her website is: www.fineartconserve.com

More News

First Heritage Blacksmithing Awards

In July 2012, the National Heritage Ironwork Group (NHIG) held its first awards ceremony for graduates from its inaugural Heritage Blacksmiths training programme. The NHIG award is the first of its kind in the UK and is a competency work based qualification covering specialist skills units in heritage blacksmithing.

NHIG established its specialist training course as part of the Heritage Lottery Fund (HLF) *Skills for the Future* programme with standards derived from Construction Skills National Occupation Standards for Heritage Skills, which NHIG helped develop in 2010. The blacksmiths on this course spent a year working towards the award, which was assessed in accordance with accepted national standards.

Adrian Legge, chairman of the training programme said: "For far too long there has been a lack of a suitable qualification against which the specific specialist skills of the conservation blacksmith working on ornamental ironwork can be judged. These skills, which are distinct



NHIG trainees on the day of the Awards

from those required to work other metals, deserve recognition and the NHIG Award is an important start in helping address this situation."

The event was hosted by Hampton Court Palace where the Tijou Screen, one of the finest examples of the work of the artist blacksmith, provided the perfect backdrop for the receipt of the award by the 2012 bursary graduates; Adrian Wolfe, Alexander Coode, David Johnston, Joanna Williams, Joanne Adkins, Matthew Boultwood and Simon Doyle (*NiC* Issue 27, December 2011, pp.1-2).

Prizes were also given for the 'Best Blacksmith', which was shared between Matthew Boultwood and Simon Doyle, while the 'Best Portfolio' went to Joanne Adkins. In addition there was one self-funded graduate, Jason Balchin from Ironart of Bath, who pioneered a new approach for employees to achieve this award. He also received a special prize for 'Heritage Ironwork Conservation Progress' in recognition of not only his personal improvement but also the development and implementation of a different approach to conservation work within his place of work at *Ironart*. Further information on NHIG can be found at: www.nhig.org.uk

Call for Contributions - NiC needs you!

News in Conservation is constantly looking for interesting and informative content to make our publication even more relevant to you, the reader. Contributions can be sent in the form of articles or press releases, small news items or comments to one of our features.

In the last issue (issue 30, August 2012) we launched a new section called Views+Opinion but to make this new offering a success we need your help. We want to hear your opinions on virtually anything conservation/preservation related, so if you feel strongly about a specific topic or current discussion, let us know and help us dispel the common thinking that conservators are naturally shy professionals and not often prone to arguing with their peers...

Dr. Manfred Koller receives IIC Forbes Prize

Congratulation to Prof. Dr. Manfred Koller, the winner of the biennial IIC Forbes Prize which recognizes prize for outstanding work in the field of conservation.

Prof. Dr. Koller was Chief of the Restoration Laboratories of the Austrian Bundesdenkmalamt 1980 - 2005 and lecturer in conservation and technology at the art academies and universities in Vienna. He has published or collaborated in over 580 publications related to conservation and was the Austrian government's delegate to ICCROM 1972 – 92. He is a founding member of the IIC Austrian Section (in 1979) and was its President from 2003 to 2011.

The Forbes Prize Lecture traces its roots to 1958, when a Forbes Prize Fund was set up at the Fogg Art Museum, Harvard University, USA, in recognition of Edward W. Forbes's services to conservation. The first Forbes Prize Lecture was given at the 1961 For more information please visit:

http://www.iiconservation.org/node/14

Akzonobel to fund Courtauld Postgraduate Students in Conservation of Wall paintings

LONDON - The Courtauld Institute of Art is delighted to announce that AkzoNobel, the world's largest paint and coatings company, will fund three postgraduate students undertaking either a PhD or MA in Conservation of Wall Painting from October 2012. This new initiative builds on AkzoNobel's current commitment to fund Sanjay Dhar, who is studying part-time for his PhD from 2009-2017. All three additional AkzoNobel Scholarships are for students from India, China and Brazil.

The Courtauld's renowned Conservation of Wall Painting Department, under the direction of Professor David Park and Sharon Cather, is the only specialist postgraduate qualification in Wall Painting Conservation in the entire English-speaking world, and takes up to eight MA students every three years. It offers two programmes and AkzoNobel Scholarships may be awarded to students undertaking either a PhD in Conservation of Wall Painting (six years if part-time, three years if full-time) or an MA in Conservation of Wall Painting (three years full-time).

Professor Deborah Swallow, Märit Rausing Director of The Courtauld, said: "AkzoNobel's funding of four postgraduate degree scholars from India, Brazil and China will further enhance the academic reach of wall painting conservation and serve as a launch pad for these scholars who, armed with critical conservation skills, will return to make a major contribution to the preservation of their countries' historical sites. This scholarship support also further strengthens The Courtauld's recent expansion into the field of Asian art."





Sanjai Dhar, top Sreekumar Menon, bottom

Sanjay Dhar's PhD topic is: "Assessing and Managing Risk: Himalayan Wall Paintings". Funding of the second student, Sreekumar Menon, also from India, will begin in October 2012. Sreekumar has been a member of The Courtauld's conservation team at Nagaur, India, since 2007, and was a contributor to the recent Buddhist Art Forum held at The Courtauld in April 2012. His research topic is Early Period Buddhist Wall Paintings of Ladakh from the 11th to 13th Century: Materials, Techniques & Conservation Implications.

Met Museum Launches Major Web Resource Offering Access to Hundreds of Its Publications

NEW YORK—The Metropolitan Museum of Art launched *MetPublications*, a major online resource that offers unparalleled in-depth access to the Museum's renowned print and online publications, covering art, art history, archaeology, conservation, and collecting. Beginning with nearly 650 titles published from 1964 to the present, this new addition to the Met's website, www.metmuseum.org/metpublications, will continue to expand and could eventually offer access to nearly all books, Bulletins, and Journals published by the Metropolitan Museum since its founding in 1870, as well as online publications.

Readers may also locate works of art from the Met's collections that are included within MetPublications and access the most recent information about these works in the Collections section of the Museum's website.

"MetPublications presents a rich and fascinating record of the last five decades of Met scholarship," said Thomas P. Campbell, Director and CEO of the Metropolitan Museum. "I am particularly pleased that this new portal allows us to share the Met's publications with a global audience. It will extend the reach of our past, current, and future publications, and give new life to out-of-print volumes." MetPublications is made possible by Hunt & Betsy Lawrence.

MetPublications includes a description and table of contents for almost every title, as well as information about the authors, reviews, and awards, and links to related Met titles by author and theme. Current in-print titles may be previewed and fully searched online, with links to purchase the books. The full contents of almost all other titles may be read online, searched, or downloaded as a PDF, at no cost. Books can be read and searched through the Google Book program, an initiative to maximize access to the Met's books.

A unique feature of *MetPublications* is that many out-of-print books are now available through print-on-demand capabilities, with copies offered for purchase through Yale University Press. At the launch of the program, 140 titles will be available in print-on-demand paperbound copies with digitally printed color reproductions.

Readers are also directed to every title located in the online library catalogues *WorldCat*, a global catalogue of library collections; and *WATSONLINE*, the Metropolitan Museum's catalogue of its own libraries' holdings.

Views+Opinions

IIC and its members – a lifelong partnership

Between 2009 and 2011, IIC received letters from Honorary Fellow Dr. Kenzo Toishi, who retired more than three decades ago from the Tokyo National Research Institute of Cultural Properties, where he was director of conservation science.

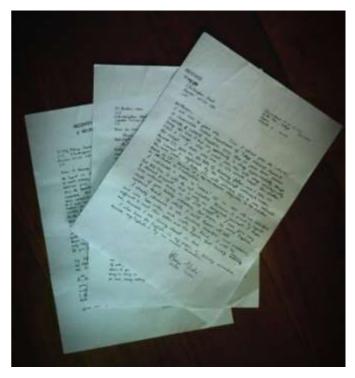
At IIC we believe that these letters are testimony to the long-lasting relationships that our organization has successfully forged with its members.

Following is a brief synthesis of the correspondence that we decided to publish in agreement with Dr. Toishi who will be 100 years old next year (2013), according to the old Japanese convention that a baby is one year old when born.

As he does not use email, any replies to the IIC office concerning this transcription from his hand-written letter will be forwarded to him by post.

Dr. Toishi wrote papers on many topics, including alkaline aerosols generated by freshly-poured concrete in new museum buildings (Toishi and Kenjo 1967, 1968).

Today, volatile organic materials (such as the VOCs given off by ageing paper in libraries and archives) are intensively researched by heritage scientists, but particulate aerosols as agents of deterioration that ought to be mitigated in some circumstances, receive much less attention. The related phenomenon of the concretion of dust particles, leading to abrasion risks during their removal, have also been studied in



recent EU-funded projects, with a view to minimising their impact through visitor management. His letter discusses related topics.

The sense of smell is not directly useful for scientific studies, and it is usually 'used' to detect volatile organic materials. But recognisable smells can arise from other sources. Examples include:

- the mineral smell of drying concrete, crystallising as it dries, with release of energy and evolution of ammonia and water vapour which are not solely responsible for the characteristic smell; the aerosols are alkaline and can also cause longer-term damage to artefacts through abrasion
- an aluminium-sputtered glass plate, which has a 'metallic' smell for some minutes after sputtering, while the initially amorphous thin layer metal forms a conformal network of fine crystals
- sputtering with different minerals gives the same effect, but a less 'metallic' smell
- the formation of anhydrous calcium sulphate, as plaster of Paris dries over several weeks, gives rise to a similar smell
- as does wheel-thrown pottery before firing, the clay particles having been worked extensively during the throwing of the vessel

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- also abraded iron
- and abraded quartz.

Abraded glass does not give off any smell, since glass is an amorphous liquid, even at room temperature, and does not move towards a more energetically stable state via the development of coarser crystals from very fine krystalchen (little crystals), with localised stress leading to the ejection of fine or even nano-particles, as happens in the above examples. Dr. Toishi points out that it is the smell of this aerosol, which indicates the time period over which a physico-chemical process is taking, place, and which can prompt analytical investigation of the process. This was the trigger for his own work on characterising alkaline aerosols from drying concrete.

A related example, not suggested by Dr. Toishi, is welding fumes, which are toxic, and form at a temperature sufficiently high to set off any smoke detectors in their vicinity. Angle-grinding produces hot particulate debris as well, and both pose similar hazards to artefacts.

What's on + NiC's List

A comprehensive list of events taking place around the world, in and around the field of conservation. Write at news@iiconservation.org if you wish to add your event

Call for papers

Interim meeting of the ICOM-CC Theory & History WG

Conservation: Cultures and Connections

15-17 May, 2013 National Museum of Denmark, Copenhagen, Denmark Please submit abstracts via e-mail to

isabelle.brajer@natmus.dk.

Any questions should also be sent to this e-mail address.

39th Annual CAC Conference and Workshops

The Canadian Association for Conservation of Cultural Property 21 May, 2013 Saint John, New Brunswick, Canada Please submit abstracts by 11 January 2013 to:

Kendrie Richardson, Program Co-ordinator cac.accr.abstracts.resumes@gmail.com

For further information about this event please visit: www.cac-accr.ca/conferences

Facture - Volume 2 The National Gallery of Art Conservation Division

Abstracts are invited for publication of the biennial journal *Facture*. The second issue will be published in the fall of 2015. Abstracts should be sent to: facture@nga.gov by November 15, 2012.

Sixth MaSC Workshop and Meeting

3-7 June, 2013
University of Pisa, Italy
Abstracts should be submitted by 31 January 2013
For further information about the programme please visit: http://www.mascgroup.org

Analytical Spectroscopy in Art and Archaeology at the Rijksmuseum

23 – 27 September, 2013
Amsterdam, Netherlands
Deadline for abstracts for oral papers and posters:
31 January 2013
For further information about the event please See:
http://www.icom-cc.org/51/news/?id=227#.UGrlk IERBo

Conferences/Seminars

34th Symposium ICOFOM: Empowering the Visitor: Process, Progress and Protest

1-3 November, 2012
Tunis, Tunisia
For further information about this event please visit:
network.icom.museum/icofom
wpgwhiskers@yahoo.ca

Chinese Heritage Conference III 2012 : Porcelain and Glass

2 November, 2012 London, UK Contact information: Xuhua (Sylvia) Zhan info@chinacultureconnect.com www.artability-art.com/chinese-visual-festival-2012/

APT Western Great Lakes Chapter 2012 Symposium: The Role of Preservation in Sustainable Architecture

3 November, 2012
Chicago, USA
For further information and to book this event please visit: http://www.apti.org/
Nathela Chatara, CAE
Administrative Director Association for Preservation
Technology International 3085 Stevenson Drive, Suite 200
Springfield, IL 62703
administration@apti.org

ICOM-DEMHIST and ICOM-CC working groups – The Artifact, its Context and Their Narrative : Multidisciplinary Conservation in Historic House Museums

6-9 November, 2012
Los Angeles, USA
For further information about this event please visit:
http://www.icom-cc.org/54/document/conferenceannouncement--the-artifact-its-context-and-theirnarrative-multidisciplinary-conservation-in-historic-housemuseums/?id=1119#.UGq1U_IERBo



NZCCM Annual Conference : Looking for Clues : Science Working with Conservation

7-9 November, 2012 Dunedin, New Zealand For further information on this event please visit: nzccmconference2012@gmail.com

La Villa Restaurata e i Nuovi Studi sull'Edilizia Residenziale Tardoantica

07-10 November, 2012
Piazza Armerina, Rome, Italy
For information on this event please contact:
Isabella Baldini, Scientific Secretary: Dipartimento di
Archeologia, Università di Bologna, P. San Giovanni in
Monte, 2 Bologna, Italy
Isabella.baldini@unibo.it
w3.uniroma1.it/cisem

11th International Symposium for Wood and Furniture Conservation

8-9 November, 2012 Amsterdam, the Netherlands For further information on this event please visit: http://www.ebenist.org/pagina/aankomend_symposium

VAST 2012 - The 12th International Symposium on Virtual Reality, Archaeology Cultural Heritage

19-21 November, 2012 Brighton, UK For further information about this event please visit: http://www.vast2012.org

A New Lease of Life: Documented Transformations of Works of Art

22-23 November, 2012
Royal Institute for Cultural Heritage (KIK-IRPA)
Brussels, Belgium
For further information on this event please visit:
http://www.kikirpa.be/uploads/files/ATSR%20V%20INFOR
MATION%20-%20mars%202012.pdf

Icon Scotland Group 15th Annual Dr Harold Plenderleith Memorial Lecture - "Conservation, Mortality and the Meaning of Life".

29 November 2012 Glasgow Royal Concert Hall Glasgow, UK

The Real Thing?: The Value of Authenticity and Replication for Investigation and Conservation

6-7 December, 2012 Glasgow, UK and Northern Ireland www.textileconservationcentre.co.uk/news/call-paperscentre-textile-conservation-and-technical-art-history

The Meaning of Materials in Modern and Contemporary Art: 2012 AICCM Paintings Group + 20th Century in Paint Symposium

10-11 December, 2012 Brisbane, Australia For further information about this event please contact: anne.carter@qag.qld.gov.au

3rd International Architectural Conservation : Building a Future by Preserving the Past

17-19 December, 2012
Dubai, United Arab Emirates
For further information on this event please visit: http://www.architecturalconservation.info/ or write to: info@architecturalconservation.info

Workshops/Courses

DARIAH Workshop: Realising the Opportunities of Digital Humanities

23-25 October 2012
Dublin, Ireland
For registration and more information please go the following link: http://www.dri.ie

Indoor Air Quality: Identification of House Dust and Indoor Particles

6-8 November, 2012
McCrone Research Institute
Chicago, USA
For further information on this event please visit:
http://www.mcri.org/home/

MCRI: Microscopy for the Conservator of Art and Artifacts

26-30 November, 2012
McCrone Research Institute,
Chicago, USA
For further information about this event please contact:
registrar@mcri.org

Paper Conservation Training Day

9 November, 2012 Sheffield Archives, Sheffield, UK

To book please contact Lorraine Logan at the Archives and Records Association at: membership@archives.org.uk

For more information about these conferences and courses see the IIC website: www.iiconservation.org