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President's Report

Tamara Lavrencic

Over 10 years ago, when I was National President for AICCM (1992-95), I was impressed by the amount of activity undertaken by members of the Council. In the months since I was elected President at the 2005 AGM, I have been overwhelmed by the enthusiasm and commitment from AICCM members at Council, Committee and Special Interest Group levels. The fact that so many members are contributing their time and energy to raise the standards for and profile of conservators is encouraging for the future of this organisation.

We're not without challenges, and raising the profile of conservators and AICCM is one of the key challenges. While I agree with the my predecessor, Eric Archer, that we need to appeal to a "much broader constituency than cultural institutions"[AICCM National Newsletter #96, September 2005], we also need to take every opportunity within our workplaces to demonstrate our flexibility to counter the perception some co-workers have of us as "nay-sayers".

Many of you will be aware that the recently formed Collections Council of Australia (CCA) is currently undertaking a major survey of conservation staffing in Australian collecting organisations, aiming to determine the conservation staff and skills requirements of Australia's collecting institutions over the next three years. I hope that this is the start of a long and fruitful relationship between our organisations and that it will extend to projects previously identified in the National Conservation and Preservation Policy and Strategy, published by the Heritage Collections Council (HCC), in 1998. [An electronic version of the document is available on the Collections Council of Australia web-site].

While the HCC achieved much in relation to their 5-year strategic plan (1996-2001), there are a number of areas still to be fully addressed, particularly in relation to a national research program that addresses conservation and preservation issues (Outcome of Key Strategies R1-3) and the development of public and targeted awareness campaigns which highlight the importance of caring for items and collections including those held in corporate and private hands (Key Strategy AR 1).

I look forward to working with the National Council over the next year and hope that you'll join with us to propel AICCM forward and upwards!

from the editorial committee

Our feature article this issue comes from **Suzi Shaw** who recently spent time in Japan furthering her knowledge of and training in the conservation of Japanese lacquer. This study tour was a follow up to Suzi's participation in the 2003 ICCROM Urushi course.

We have a number of reports on projects and professional development activities and reviews of conferences. **Alison Wain** reports on an exciting joint research project between a range of institutions and organisations on the use of short pulse lasers for cleaning heritage artefacts. **Julian Bickersteth** bring news of the ICS project underway in Antarctica. We hope that Sarah Clayton and her team will bring us updates on the project as they face a long cold winter. **Greg Peters** was fortunate to receive support from ISS for his study tour to UK, Helsinki and the USA. His focus was on the conservation of 20th century furniture finishes. **Joanna Barr** attended the Big Stuff seminar in Canberra in December and reports on the successful event. **Sean Loughrey** has been experimenting with a digital SLR and near IR reflectography and has provided a technical note on the results of his experiments so far.

Our new President, **Tamara Lavrencic** presents her first President's Report. We have a number of letters to the editor and our regular People and Places and Calendar.

We hope you enjoy this issue of the newsletter.

Jude Fraser, Katy Glen and Helen Privett

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Techniques and Traditions of Japanese Lacquer Conservation

Suzanna Shaw, Conservator of Frames and Furniture, National Gallery of Victoria

Two years ago I attended the course *Urushi 2003: International Course on Conservation of Japanese Lacquer* supported by the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM) and held at the National Research Institute for Cultural Properties, Tokyo (NRICT). I already had a passion for lacquer, and this course only strengthened my interest. So much so that within a few months I was already concocting plans on how to return. With the generous assistance of Hiroshi Kato, Director of the Department of Restoration Techniques at the NRICT, my plans were finally realised in September 2005. Supported by two grants from the Ian Potter Cultural Trust and the NGV Clemenger Travel grant, I took leave of absence from my position for just under five months, packed up my house, and headed off to the land of the rising sun. My time in Japan fell into three distinct phases: initially I acted as assistant/observer at the *Urushi 2005: International Course on Conservation of Japanese Lacquer*; following this I spent one month in the city of Wajima at a lacquer atelier; and finally I undertook a period of two months independent study of Japanese restoration techniques at the NRICT. The broad goals of my study were to become more skilled at identifying the manufacturing techniques of Japanese lacquerware and to increase my knowledge and practical skills utilising Japanese techniques to restore lacquerware. My future aim is to be able to incorporate these techniques into my work practice and in particular, to find ways to utilise *urushi* as a restoration material without the negative drawback of its irreversibility.

Urushi is the Japanese term used for the sap of the *Rhus Verniciflua* tree, a relative of the poison ivy family. The term 'lacquer' is also used to refer to *urushi* though it is less precise and can refer to sap used in a similar way but from different species of trees in Asia or even synthetic coating products. *Urushi* is a water in oil emulsion that is unique because the main component, *urushiol*, is polymerized in the presence of oxygen and high humidity to an almost impervious film. *Urushi* has been used for thousands of years in Japan and other Asian countries to preserve and decorate objects such as armour, furniture, writing boxes, *inro* and *netsuke*, as an adhesive for repairing ceramics, and to seal architectural wood. This most ubiquitous of materials continues to be used in Japan, however at vastly reduced quantities due to the considerable expense to both grow

and tap the lacquer trees, and because of the cost of materials associated with its decoration.

The NRICT has various roles: the training of international specialists and transferring technology for preserving cultural properties in international cooperative projects and courses such as *The International Course on Conservation of Japanese Lacquer*, the restoration of important cultural properties held in foreign collections, assisting with the preventive conservation training of students at the Tokyo Geijitsu Daigaku (Tokyo University of Fine Arts and Music), and preserving cultural heritage within Japan, both tangible and intangible (e.g. craft skills, folk songs and plays, instrument making skills). *The International Course on the Conservation of Lacquer* is held every second year and runs for three weeks. The 2005 course content had been much altered since my initial participation in 2003 to include a larger and more in-depth conservation component. The main techniques taught during the course – and to be elaborated on later in this article – were the making of an *urushi*-based adhesive suitable for laying back down delaminating coating film, and the use of an *urushi*-based filler for cracks and wood splits. The packing and storage of lacquerware, the use of *gampi* paper strips to temporarily secure delaminating lacquer, and the *urushi gatame* technique of impregnating micro cracks with dilute *urushi* were also addressed but have been discussed in the previous course review and so will not be touched on here.¹

The course included a three-day excursion to the lacquer town of Hirasawa in Nagano prefecture. After warning all the participants of how cold it was two years ago, not to mention wet, we arrived to find Hirasawa enjoying something of a heat wave. This gave us a unique opportunity to see the refining of lacquer using the *nayashi* and *kurome* processes of stirring the lacquer in the summer sun to improve the properties of the *urushi*, a technique not often seen since the invention of an electric stirring machine with heat lamps. We were also fortunate to be driven into the hills to a lacquer forest and shown how the trunk of the tree is first scraped of its bark, then a special knife is used to pierce the water and sap layers between the wood and bark allowing the sap and water to ooze out and ferment. The *urushi* is collected drip by drip using a metal spatula with only around 200g collected from each tree, making it an expensive product to produce.



Satoshi Katsumata using a *shimbari-dai* to secure delaminating lacquer adhered back in place with *mugi urushi*

The majority of professional lacquer conservators in Japan, of which there are very few, have been trained firstly as artists. This means they have a great familiarity with the materials used in the manufacture of cultural objects and mostly use these materials in their restoration. Techniques such as the use of the *shimbari-dai* (framework to hold down lacquer flakes during adhesion/consolidation) have been developed in the last fifty years or so and are often used in combination with more traditional methods such as the use of *kokuso* (a mixture of an adhesive type of *urushi*, sawdust and hemp fibres) as a filler for cracks and deeper losses. The conservation course at Tokyo Geijitsu Daigaku (Tokyo National University of Fine Arts and Music) places a similar emphasis on familiarity with manufacturing techniques as students spend a significant portion of their study copying important cultural properties in their specialty. This is a vital part of their training, and as I saw with the restoration of temple sculptures, the skills learned are much needed when new parts need to be carved to replace missing elements.

The tools of a lacquer conservator are many and varied. Tools are commonly made throughout one's apprenticeship, or made on a needs basis. Though lacquer shops sell standard tools such as wooden spatulas and special brushes, they often have to be adjusted for each individual job. An imperative part of my *urushi* education was to become more familiar with the unique tools and materials used in the manufacture of lacquerware as these are generally the same as those used in their conservation.

A week after the completion of the course, I was sent with the assistance of both Lesley Kehoe, a Japanese Art dealer

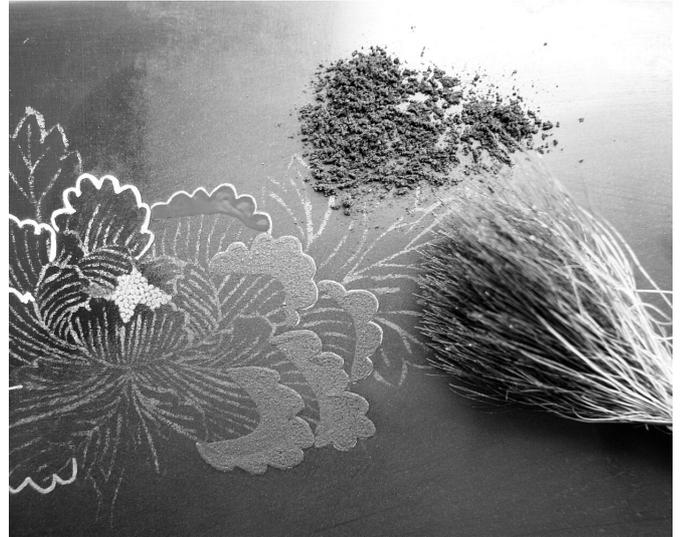
in Melbourne, and Hiroshi Kato to the small city of Wajima on Japan's Noto Peninsula for four weeks. Approximately half of Wajima's population of 30,000 are involved in some way with lacquer and the city itself is the only *urushi* producing area in Japan to have been officially designated an Intangible Cultural Asset by the government. Wajima is also famous for its morning market, fishing industry, *Taiko* drumming and *sake*. Needless to say, I thought I'd died and gone to heaven. After convincing people that I couldn't afford to stay in a hotel for one month, rental accommodation was kindly found for me though there was to be no gas cooking facilities, no phone, no heating, no furniture and unknown electric cooking facilities or a refrigerator. Fortunately, my landlord and the community of Wajima are extraordinarily generous, and within a few days I was lent a futon, small table, electric heated carpet, electric frypan, and a small stereo for entertainment. My house was embarrassingly huge, with my things occupying the second of three levels. Though a bit lonely by myself, my house soon became busy with students getting help with English homework, or the *nabe* (hot pot) parties that occurred every Sunday night with a small group of similarly aged lacquer artists and other locals.

My four weeks in Wajima were spent at the atelier of one of Japan's leading contemporary lacquer artists Tatsuo Kitamura, whose art name is Unryuan ('dragon among clouds'). Kitamura-san's work is inspired by the shapes and designs of Edo period (1615-1868) and has more recently incorporated contemporary forms and decorations utilising the technical sophistication characteristic of that period. Edo period materials and techniques are not often used nowadays due to their time consuming nature and expense, so this was truly a rare opportunity to see extraordinarily high quality lacquer objects being created. Kitamura-san's generosity was astounding as I basically stopped one of his staff members from working for a whole month while he taught me. Some years ago I learnt basic *makie* (gold powder) techniques, so Kitamura-san furthered my skills with the more challenging techniques of *shishiai* and *togidashi makie*. Yuko Wada, another Wajima artist, taught me the technique of *chinkin* where a thick layer of lacquer is carved using chisels, and the grooves filled with wet lacquer into which coloured or metallic pigments are applied to highlight the design. I was also fortunate to be given lessons on building up the foundation layers using Wajima *jinoko* (a type of baked diatomaceous clay), which provides an extremely strong and durable foundation for which Wajima is famous. The people of Wajima protect their industry by allowing only union members to purchase the very high quality clays. Kitamura-san is also the head of the Wajima Traditional Techniques research group and had just completed an investigation of methods to remove mother-of-pearl from several types of shell, which was very informative for my own work. The four weeks experience was invaluable in giving me more confidence in using the

materials involved in Japanese lacquer conservation, but also teaching me how to care for the tools such as the expensive handmade rat- and human-hair brushes. It was truly with a heavy heart that I left the friendly faces of Wajima to return to the hustle and bustle of Tokyo to begin my two months of independent study of Japanese conservation techniques at the NRICPT.

Urushi, as a restoration material, has been used for around four thousand years as an adhesive for broken ceramics and for probably as long to repair *urushi* objects themselves. Traditionally, people would give their objects to a lacquer artist to restore and therefore the same materials were used to make the object as to restore it. This tradition continues to this day and the artist/conservators carry out their work with a great sensitivity and feeling for the material. Four types of materials/techniques are commonly used in the conservation of lacquerware. *Mugi urushi*, a mixture of wheat flour, water and raw *urushi*, is utilised as an adhesive for delaminating lacquer coating film or shell inlays, and in some cases a consolidant. *Kokuso* is generally a mixture of *mugi urushi*, sawdust and sometimes hemp fibres and this is used for filling cracks and losses. *Sabi* is a mixture of raw *urushi* mixed with a fine type of baked clay, and is used in the process called *kiwasabi* for filling smaller losses as well as lining the edges of losses to prevent further delaminating. And finally, *makiji*, whereby losses are integrated by sprinkling matte foundation clays such as *jinoko* onto a surface painted with wet *urushi*. Once these materials and the tools used to prepare them become familiar to the user, they can be manipulated to change their properties to suit each situation. For example, it is possible to increase the tackiness of *mugi urushi* by humidifying it prior to application; more or less *urushi* and sawdust can be added to create the desired density of *kokuso* depending on the depth of crack to be filled; coarser sawdust can be incorporated to make a more spongy *kokuso* fill material suitable for the deep parts of fills; different grades and colours of clay powders are used for making *sabi* depending on factors such as the appearance of the surrounding original *urushi* coating film. There are also many different grades and types of *urushi* with varying properties, for example extremely fresh *urushi* hardens at a much lower humidity than older *urushi* making it more suitable for the restoration of antique objects (especially those in foreign collections) which have been in a drier climate for many years. As mentioned in the previous course review, it is also possible to cast *urushi* onto glass so that it can be peeled off then adhered in place using a reversible adhesive.

These materials, though unquestionably more sympathetic and providing a better aesthetic result than any modern synthetic materials, take a considerable amount of time to utilise in a treatment. For example, a 7mm deep crack



Shishiai makie panel showing a type of powder brushed over wet red lacquer to create a more three dimensional design.

would take several weeks to fill; each layer of *kokuso* can be no more than 2-3 mm deep otherwise it won't harden properly, and each layer takes anywhere from 3-7 days to harden before the next layer can be applied depending on the environmental conditions and *urushi* used. Though *urushi* is an incredibly stable material when kept in a museum environment, a major drawback of its use as a restoration material for conservators working in the Western tradition is its irreversibility. Once polymerized, *urushi* is resistant to water, heat, acids and alkalis. Mistakes can be corrected within a few days after the treatment began, but once the *urushi* is fully polymerized the restoration can only be reversed by mechanical means. In this way, the use of *urushi* in treatments has certain similarities to the use of epoxy products. Unfortunately, these reasons may preclude the use of some Japanese techniques in many Australian conservation laboratories.

I spent some time with Hiroshi Kato discussing why the NRICPT is promoting the use of *urushi* as a repair material despite its irreversibility and potential for confusion with the original when performing analysis or examining the object later on. Of course, when kept in a controlled environment, *urushi* is an incredibly durable material as evidenced by many surviving archaeological objects. A cursory summary of this deeply cultural reasoning as explained by Kato-san is a desire to maintain a tradition, respect for the original creation of the object, and finally quite importantly, a feeling. I said to Kato-san, "but I have to be able to give conservators a concrete reason – can you be more specific?" As I worked more with *urushi* I did begin to understand this feeling a little. Interestingly, the contracted conservators at the Institute have different working methods and utilise different materials with differing levels of reversibility. Kato-san didn't necessarily think one way was better than another. By coincidence, at the time of this discussion I was reading Soetsu Yanagi's philosophy on

beauty in Japanese crafts.² He wrote at length on how the creation of truly beautiful objects was a matter of instinct and feeling, not analysis, and that all such distinctions as good/bad, right/wrong when making or viewing crafts should be eliminated, and I think perhaps this is a similar aesthetic feeling towards methods of restoring artwork. Another essential cultural aesthetic important for a conservator is that of *sabi* - seeing beauty in things that are old and faded - and therefore in Japan the subtly aged patina of a lacquered surface is highly prized. The NRICPT promotes and carries out treatments with this, and a Code of Ethics similar to our own in mind, that is, treatments are carried out in order to maintain the object's current condition for around 50-100 years. The Institute hopes that some day a standard can be created for the treatment of lacquer in a similar way to developments in other traditional areas such as paper conservation, however currently this seems very difficult.

In our profession we aim for reversibility of treatments though in practice this is not always possible. I would like to argue that the use of *urushi* as a treatment material is possible under the current AICCM Code of Ethics and Code of Practice. For example, *urushi gatame* is the process of impregnating the micro cracks of a degraded *urushi* coating film with diluted *urushi* with all excess remaining on the surface carefully wiped off. If a synthetic consolidant such as Paraloid B72 (a co-polymer of methyl methacrylate and ethyl acrylate) was used, realistically it would be impossible to remove all of it if required, and therefore it is not fully reversible either. The AICCM Code of Ethics can in fact support the responsible and informed use of *urushi* in conservation treatments through its promotion of "respect for the people who created it"³ and an "unswerving respect for the physical, historic, aesthetic and cultural integrity of the object".⁴ Of course, some treatment requirements such as adhesion of lifting lacquer might just as easily be carried out with a synthetic adhesive, so each situation should be fully assessed and, "The advantages of materials and methods chosen must be balanced against their potential adverse effects on future examination, scientific investigation, treatment, function and ageing".⁵

Many Japanese conservation techniques can be incorporated into the treatment repertoire of an Objects Conservator e.g. the use of the *shimbari-dai*, *gampi* paper strips to secure delaminating lacquer flakes awaiting treatment, and casting *urushi* films to be adhered into losses with a reversible adhesive. Other more irreversible treatments such as *urushi gatame*, *kiwasabi* and *makiji*

could be utilised in certain circumstances (especially if the object is to be kept in a controlled environment) after due consideration and discussion with the relevant stakeholders. I hope to continue my study and see if there are further ways to improve the reversibility of the more interventive treatments utilising *urushi*.

I would like to sincerely thank the staff of the NRICPT and in particular Hiroshi Kato, without whom none of this would have been possible. The conservation techniques described in this article were mostly learnt from Satoshi Katsumata, an *urushi* artist and conservator at the NRICPT who was extraordinarily generous with sharing his vast knowledge and skills. I would also like to thank Lesley Kehoe for her kindness in initially arranging my visit to Wajima. And finally, my heartfelt thanks to Tatsuo Kitamura, his staff, especially Hideki Furuhashi, and the people of Wajima who gave me so many extraordinary and unique experiences. Thanks also to the NGV, and particularly Holly McGowan-Jackson, for generously allowing me to take leave from my position.

Over the next few months there are several lacquer exhibitions and related events planned as part of the 2006 Australia-Japan Year of Exchange:

Unryuan: Contemporary lacquer master
Art Gallery of New South Wales
26 January - 23 April 2006

Kaoru (Aroma)
Hamilton Art Gallery, Victoria
May 10 - July 10 2006

Lacquer seminar in association with *Kaoru*
Hamilton Art Gallery, Victoria
May 12-14 2006
Guest speakers: Julia Hutt (V&A) and Hollis Goodall (LACMA)

Lacquer artists will demonstrate the process from retrieval of sap to manufacture of the final product. Registration required. Please contact Lesley Kehoe for further details 03 9671 4311 or email lesley@kehoe.com.au.

¹ Shaw, S. 2004. *Urushi 2003 – International Course on Conservation of Japanese Lacquer*. AICCM Newsletter 90, pp. 21-22.

² Yanagi, S. 1972. *The Unknown Craftsman: a Japanese Insight into Beauty*. Tokyo: Kodansha International.

³ AICCM Code of Ethics for the Practice of Conservation of Cultural Material in Australia, Principle of ethical behaviour No. 1

⁴ AICCM Code of Ethics for the Practice of Conservation of Cultural Material in Australia, Principle of ethical behaviour No. 2

⁵ AICCM Code of Practice, Treatment point 34.

Letters to the Editor

To The Editor,

I am very concerned about current conservation standards in Australia. It seems to me that some things are missing in our major archives. They do not appear to me to be keeping up with the new materials that time and technology are now offering them. Is there a problem of there not being enough trained conservators employed at senior executive levels in our major archives?

There is no question that paper conservators are qualified in matters pertaining to the preservation of paper items and are trained – at least in Australia - in the chemistry of the latest materials. To be more specific, the Type 1 archive boxes used for long term storage are the focus of my concern. The long-term storage of paper records in archives is physically one of the largest sectors in paper conservation activities and one of the most financially demanding. It is in this sector that I think some things that are very important may be missing. Time and technology have provided a new material that should be a welcome addition to conservation practice – polypropylene. And yet many of our major archives still do not accept, and some oppose, the use of polypropylene in Type 1 boxes. Why is that happening?

With the advent of polypropylene, there is a strong case for ensuring that the skills of those senior executives that we entrust with making decisions for the conservation of our paper heritage records, include training in plastics chemistry. What is not lacking in the conservation profession is the knowledge of the chemistry of plastics.

Do conservators accept polypropylene for archival storage? Eminent conservators in the U.K. and the U.S.A. that I have contacted and most of the conservators that I know in Australia accept it. And of course, practically every archive in Australia buys our range of polypropylene products but not significant quantities of our Type 1 boxes.

Another missing factor that is apparent to me in our archives, is the understanding that the criteria for establishing the quality of enclosures used in the storage of paper records, are different from the criteria for making paper last longer. A very durable paper may not necessarily make a very durable enclosure – particularly if it can react chemically with the contents of that enclosure. If the contents of the enclosure are 8kg of acidic paper (typical for Type 1 boxes in Australia) its life will be limited. If it is made of pH8.6 buffered paperboard will the life of the enclosure be significantly better? I don't think so. Conservators that I have spoken to in Australia and internationally understand this as

individuals, but our major archives appear to be clinging to the use of the buffered paperboard introduced by National Archives over 10 years ago. Isn't a chemically reactive archive box an oxymoron?

The archival product supply companies in Australia that offer "500 year" archival enclosures show extreme examples of this misunderstanding. Paper conservators know that paper can be made or treated to last 500 years under the right conditions but the life of an enclosure may well be determined by what it contains. If the contents in the enclosure are acidic, and most papers in storage are acidic, the life of the enclosure will be determined by the contents – not the material from which the enclosure is made. If the enclosure is made of an alkali buffered paperboard, a chemical reaction will take place with its contents. The "500 year" claim for enclosures is a misleading marketing myth that is wrongly claimed, by the companies using it, to be supported by the National Archives of Australia.

Another missing factor, in my opinion, is that there are still no conservator approved tests to establish what materials, other than paper, are of archival quality – other than the Photographic Activity Test developed by the Image Permanence Institute in Rochester, New York. And that test relates only, as it says, to photographic materials. Perhaps the reason for the omission is again due to archives thinking of tests for paper products and not in terms of the criteria required for archival enclosures. Also, as explained above, the criteria for paper products as archival materials may well be different if that material is to be used as an enclosure.

Polypropylene has been around for well over a decade and it is in use in many applications. It is accepted and in use globally in food packaging, in surgical procedures, in stationery and in long term photographic storage. Despite its lack of acceptance by so many of our larger archives, conservators in Australia have adopted polypropylene, but not nearly as widely as logic suggests that it should be. Price was initially a barrier but the premium is now small. If the whole of life cost is considered, polypropylene wins hands down. The cost of repacking boxes in long term archives is avoided when polypropylene boxes are used.

The Public Records Office in Hong Kong has been using our Type 1 polypropylene storage boxes for several years. I think that it is a rare show of leadership in the industry and a credit to their conservators. I admit to getting pleasure from selling plastic products to China.

Why has the paper conservation profession been so slow in addressing these missing factors? And if there is any doubt that it is falling behind – the search engine on the Institute of Conservation (ICON) website did not recognize the word “polypropylene”.

My company has taken steps to overcome this lack of criteria when assessing the suitability of materials for archival enclosures. To be totally objective, Albox asked two chemists – one a PhD in organic Chemistry, the other a PhD in Chemical engineering – what specifications were desirable for boxes that will hold papers (that will usually be acidic) for up to 100 years. The questions and answers were as follows:

Q:What is the ideal environment for the inside of such boxes?

A: Inert.

Q: Should the boxes be airtight?

A: No. Over time the paper contents will naturally decay to some extent. If the gases thus produced cannot escape they will contribute to more rapid deterioration. The boxes should therefore be allowed to “breathe”. Air access should however be reduced to a minimum to prevent the entry of unwanted air. The entry of air and the moisture that it will normally contain, will contribute to a more rapid deterioration of the contents.

Q: The finger holes in each end of the present paperboard Type 1 boxes may be functional for handling but are they good for the internal environment of the box?

A: No. As explained above, the entry of unwanted air is not good. The thought of fingers entering the box environment is abhorrent - not to mention possible rodents and insects. The holes are needed in paperboard boxes for removal from the shelf but the protective flaps introduced by Albox in its paperboard Type 1 boxes for short-term storage minimise the risk to the internal environment.

Q: What are the chemical guidelines for the best material to use in making these boxes?

A: As chemically inert and stable as possible.

Q: Is the addition of an alkaline chemical buffering to the box material a helpful stabiliser for the box environment?

A: Quite the contrary. The presence of an alkali in a box of acidic paper is inviting chemical reaction. The presence of any moisture will facilitate the reaction. The idea that the alkali will offset the acidic gases from the paper and thus prolong its life is chemically illogical.

Q: Is it in the interest of the preservation of the contents of the box to have a box material that can absorb moisture?

A: Firstly, it is not in the interests of the longevity of the box to have water being absorbed and evaporating. This will promote the degradation of the box itself and for long-term storage this is not desirable. Secondly, the concept of having the box act as a sponge to moderate the humidity of the interior of the box, implies that the design of the box allows such variation in humidity. Changing humidity is undesirable in the box interior and should be minimised by the box design rather than trying to later correct the problem by adding undesirable chemicals.

It is apparent that buffered paperboard boxes do not meet the criteria that are the conclusions reached in those questions and answers. The fact that many archives are still using them for long-term storage is once again an illustration of something that I think is missing in current paper conservation practice in the major archives.

Is the missing factor a lack of trained conservators at senior executive level in those archives?

Trained conservators know that polypropylene is a product made from the gases that were previously burned off in the production of petroleum. It does not rot or support mould growth or attract rodents and it is not affected by water. Although it is re-cyclable, polypropylene has an unlimited life and the high cost of repackaging can be avoided even in very long term storage. No trees are cut down and no animal by-products are used to produce polypropylene. Paperboard is a much less environmentally appealing product.

Like most products, it is imperative to ensure that the suppliers and manufacturers understand the end use of their products and are responsible for maintaining the appropriate specifications and quality control.

There is another issue that appears to me to have been overlooked by archives. Occupational health and safety standards have been improved. The standard Type 1 storage box can hold over 8kg of paper and it usually does. This is in excess of the recommended limit for female employees handling boxes above waist height. Albox has designed a smaller box that takes only 7kg. The size still conforms to the requirements of standard archive shelving.

Darby Johns
Managing Director of Albox Australia Pty Ltd

The Editorial Committee, with approval from Darby Johns from Albox, contacted The National Archives of Australia for their response to Mr Johns letter to the editor. The NAA response follows.

To the Editor,

The National Archives has had extensive correspondence and discussion with Darby Johns over the advantages and disadvantages of polypropylene versus alkaline-buffered corrugated paperboard boxes. In response to Mr Johns' views, we have undertaken a comprehensive review of published technical and scientific data on this topic, including information supplied by Mr Johns. We have informed Mr Johns that we have not been able to find any technical research findings or other operational evidence that would cause us to overturn or amend the earlier technical assessments on which we base our view that alkaline-buffered corrugated paperboard boxes are most appropriate for the storage of the bulk of materials in the national archival collection.

The National Archives is always open to considering new and improved methods and reviews its practices in the light of findings substantiated by technical or operational research. As commercial interests develop and promote new products and materials in this area, we will continue to investigate storage options as resources permit and in balance with our other preservation priorities.

The National Archives currently uses polypropylene containers for storage of items in our custody where it is considered appropriate for the needs of a given item. Our policy is to make choices about the use of storage materials informed by knowledge of the specific items to be stored, operational requirements for handling and movement, and the environmental conditions in which the items are to be kept.

We remain committed to ensuring that the national archival collection is stored in the optimum manner and welcome informed discussion on this topic.

Kylie Scroope
Director
Preservation
National Archives of Australia

To the Editor,

I attended the AICCM National Conference, *Directions in Research* in October 2005, representing the Collections Council of Australia Ltd. In response to a question from the floor to Keynote Speaker, Dr Ivan Cole from the CSIRO, I provided a casual reference to a chapter in the North American "engineer's bible".

The *Museums, Libraries and Archives* chapter of this "bible" places vital conservation information regarding cultural buildings (environments and structures) in a key reference book for engineers and architects in North America. Its inclusion demonstrates how conservators can effectively inform other technical specialists about conservation research in building, display/storage and renovation projects.

This letter is to provide more information and the full citation, which is:

American Society of Heating, Refrigerating and Air-Conditioning Engineers Inc. 1999, *ASHRAE Applications Handbook*, American Society of Heating, Refrigerating and Air-Conditioning Engineers Inc, Atlanta, Georgia.

The *Museums, Libraries and Archives* chapter appears in subsequent editions, usually as chapter 20 or 21, and is available for purchase at the ASHRAE website as a chapter or as part of the larger volume.

Go to:

<http://resourcecenter.ashrae.org/store/ashrae/newstore.cgi?itemid=16997&view=item&page=1&loginid=4790505&words=museums%2C%20Archives%20and%20libraries&method=and&>

Stefan Michalski of the Canadian Conservation Institute was invited to collaborate on the writing of this chapter. He provides some background on this experience at http://www.cci-icc.gc.ca/publications/newsletters/news24/temperature_e.aspx.

Veronica Bullock
Collections Council of Australia Ltd.

National Council News

What has your National Council been up to recently?

- Negotiating website issues with Secretariat Australia and sorting out errors in the membership database
- Completing the application for the AICCM public fund, which will give AICCM membership of the Commonwealth Government Register of Cultural Organisations and Tax Deductible Gifts
- Developing an AICCM advertising policy and investigating the potential for paid advertising on the AICCM website
- Addressing issues of copyright and legal liabilities, as they pertain to AICCM publications and promotional material
- Working on a way to provide Australian conservators with continuing professional development programs, in partnership with an external service provider
- Working with the Canberra Institute of Technology with regards to the course content of their planned Associate Degree course in Conservation Studies
- Developing draft statements of skills expected for Conservators and Conservation Technicians/Assistants
- Working on getting the AICCM professional membership category up and running again by June/July 2006
- Digitising past issues of the Bulletin to place on the members login area of the website, and making already existing electronic copies available online
- Investigating a "print-on-demand" service for out-of-print publications
- Helping to organise the 2006 and 2007 national conferences, respectively in Sydney and Brisbane
- Helping SIGs run their programs
- Auditing stock of previous publications available for sale
- Via the various Publications Committees, management and production of the National Newsletter, the Bulletin and the website
- Dealing with questions and problems as they arise

Where do your membership fees go?

For 2005-2006 the AICCM is basing its budget on an income of about \$80,000, with 75% of this income expected from membership fees, 12% from government grants and remaining amount from advertising, interest and various other sources.

Our predicted expenses can be broken down as follows – please note, these are approximate figures only.

- Secretariat services – 38%
- Publications (printing and design services) – 19%
- Postage (mostly of publications) – 9%
- Insurance – 5%
- Accounting and auditing fees – 5%
- Web hosting – 8%
- State division membership percentages – 5%
- Bank charges – 2.5%

The remaining 8.5% is used mainly to cover teleconference fees and travel for Council members and State Representatives to face-to-face meetings, as well as the AICCM awards, various legal fees and other miscellanies.

Retraction

Those who read your last Newsletter from cover to cover will no doubt be surprised to find another issue in the mailbox! In the last issue, we stated that the AICCM National Newsletter would henceforth be available in electronic format only. However, the Newsletter will continue to be provided in hard copy until we can ensure membership would not be unduly affected by this change – so apologies from the Publications Officer for any undue alarm or confusion.

AICCM National Council will be investigating whether it is possible to give members the choice to receive their publications in paper and/or electronic form.

Please note, this issue of the National Newsletter (and others) are available on the AICCM website and can be accessed by using your member login – click on the "Newsletters" link at the top of the home page.

Please direct any questions or concerns to the Publications Officer, Alice Cannon, at acannon@slv.vic.gov.au.

People and Places

ACT

Australian War Memorial

Sarah Clayton and **Ainslie Greiner** from the Textile and Objects Labs will head off to Antarctica for the winter to work on objects from Shackleton's hut and will be based at the New Zealand Scott Base.

The Paintings Lab has welcomed a new member, **Ilaria Poli**, who is working with **Sharon Alcock** on the glazing and backing of paintings, while **David Keany** is currently working on painted glass.

Alison Wain attended the 14th Triennial ICOM-CC Meeting and the LACONA VI Lasers in Conservation Conference and has since been busy co-ordinating information for an ARC grant obtained to study short pulse lasers in conservation (see note in this newsletter) and possible long pulse laser workshops in 2006. With the help of most of the large technology conservation team, she also ran the BigStuff Seminar, a 2-day course on planning and managing large technology conservation projects.

Alison, **Andrew Pearce**, **Andrew Schroeder** and **Jamie Croker** have been reviewing the Memorial's operating vehicle program in conjunction with curators, producing detailed costings for operational display vs. mothballing. This is likely to result in a significant drop in the number of operational vehicles, so that resources can be spread more widely across the collection as a whole. Swings and roundabouts eh? Work is also proceeding on large items for the new post-45 conflict galleries currently being constructed at the Memorial, with Jamie and **Lee Davies** stabilising the Iroquois helicopter and **John Kemister** and **David Gordon** starting the massive task of preparing the bridge of the HMAS Brisbane for outdoor display.

In the Textile Lab **Bridie Kirkpatrick** has been working on items for *Sport and War*, especially the fabulous but extremely fragile International Camel Corps flag; **Anne d'Arx** continues to power through the ever-full freezer program; **Daniel Wardrop** has been scoping for the treatment of some textile components of the LTO collection, preparing items for display in the Summer Treasure Trail and freezer program.

Photographic research and development are currently working on the RAN Public Relations series acquired in the early 80's. The collection consists of more than 50,000 large format and 35mm black and white and colour negatives. They were taken between 1959 and 1982 (later photos being retained by the Department of Defence).

They will all be cleaned, housed in new envelopes and stored in appropriate conditions. Accompanying original documentation will be treated similarly.

National Archives of Australia - National Office

The lab has been busy with comings and goings over the last few months. Conservation scientist **Rajani Rai** went on maternity leave late in 2005 and is now the proud mum of baby Anisha. Currently filling Rajani's position is **Inderjeet Chada**; Inderjeet is "on loan" from another section of the Archives and is enjoying having the chance to use her chemistry qualifications again after a long break. Conservator **Fran Cumming** has moved back home to Sydney to complete her Masters studies and write the definitive novel of our time, so we have an unfilled PO1 position at the moment.

Our two lab assistants, **Jess Wignell** and **Clair Murray**, have become permanent staff. Clair completed a second unit of Chemistry at the CIT last year and Jess has completed one of several units in Insect Science through the University of Queensland. She is known around these parts as "The Bug Lady" and has amassed quite a collection of creepy-crawlies. Jess is also starting a project with **Ian Batterham** and **Ellie McFadyen** to test the amount of environmental buffering our storage boxes provide under various climate conditions and positions within our store rooms.

Sally Kneebone has been powering through a backlog of lab work and her major achievement so far is the completion of the treatment of an aerial photomosaic, which was begun more than three years ago! The photomosaic dates from the 1920s and was adhered to a piece of plywood, which had become extremely warped over the years. The treatment was started by Carey Garvie (now at National Film and Sound Archive) and involved plotting all the pieces of the mosaic before consolidating the deteriorated gelatin emulsion and removing the photos from the plywood with moisture. Sally has used the plot of pieces to stick the mosaic back together again. The item will now be digitised and made available on the NAA website.

Suellen Bailey has finished the repackaging of a consignment of official gifts received by Hon. Kim Beazley Snr, and is currently treating files from 1950s High Court cases relating to copyright breaches. **Cheryl Jackson** is working on uncurling and removing the mould from a series of 35mm colour negatives that record the damage inflicted on Darwin by Cyclone Tracy in 1974. The negatives depict

all the neighbourhoods and individual houses that were damaged or destroyed by the cyclone, making the series a unique document of one of Australia's worst natural disasters.

Prue McKay has completed the treatment of a badly water-damaged map on starched cloth. The map, dating from 1883, shows the route of an expedition through the top of Cape York Peninsula in Queensland, by surveyors plotting the location of a telegraph line from Cape York to parts south. Printed in black ink and annotated with red and blue, it had been all but destroyed by water and mould, with dark black mould growth down one side and brown water stains and strong tide lines over the whole surface. With ethanol and water treatment on the suction table and a new lining with Japanese tissue and starch paste, the map has a new lease on life. It is to be digitised for display on our website, and sent back to the Brisbane office for storage.

Patinations Furniture Conservation Services Pty. Ltd.

Greg Peters returned from an International Specialised Skills Fellowship after researching the conservation of clear coatings for 20th Century furniture. A whirlwind study trip took him to the UK, Europe, Scandinavia and the US. See more detailed report elsewhere in this newsletter. He has since completed his annual month-long lecture series and workshops at the Australian School of Fine Furniture in Launceston.

Patinations staff have been working on a collection of furniture from the homestead of Gidleigh that recently changed hands after 150 years in the same family.

Adele Pate, our newest staff member, has joined us as a trainee cabinetmaker prior to deciding if furniture conservation is for her. I would love to hear from anyone who has suggestions on the training of furniture conservators within Australia.

NEW SOUTH WALES

Australian Museum

In addition to our usual treatment and preventive schedules, the Australian Museum is beginning a program of refurbishing several of its permanent galleries, which has **Michael Kelly** currently taking down the articulated skeletons and prepared mounts from the mammals collection, fitting to storage frames and carrying out pest control treatments.

We also have construction of a new science building with movement of several collections into new natural science storage areas and the transfer of large cultural objects offsite. **Sarah McHugh** is working on plans to move the cultural objects, while **Sue Valis** recently visited Museum Victoria where she gained valuable insight into the

relocation of natural science collections after talking to conservators **Catherine Lovelock** and **Michelle Berry**, **Dermot Henry** (Senior Collection Manager) and **Neville Quick** (Manager, Collection & Research Facilities).

January 30th has seen the end of a 3-month treatment program for one of the Australian Museum's mummies, which to our knowledge has not been previously treated.

Heather Bleachmore has been working steadily to stabilise fragile linen wrappings before the mummy is returned for display later this year. The linen wrappings are in an extremely fragile condition due to embrittlement, desiccation and fibre breakage as well as severe insect damage. Priority was given to realigning and securing the linen wrappings in position before encapsulating the entire mummy in fine nylon netting. Once encapsulated, the mummy was stable enough to make a short trip to the Royal Prince Alfred Hospital to undergo a CT scan, which has revealed some fascinating facts about the materials used and methods of manufacture. Research into the materials used is continuing including dating of the linen and pigment identification.

Sue Valis has been preparing several objects from the Museum's Pacific Collection which will complement an exhibition of photographs by Glenn Jowitt. The photographs are part of the publication entitled *Pacific Patterns*, which is also the name of this exhibition. Sue has also been preparing a loan of bark cloths to be exhibited at RMIT in Melbourne.

Currently we have **Takaronga Kuaotonga**, curator of the National Museum of Vanuatu, Vanuatu Cultural Centre with us for eight weeks to work with **Colin MacGregor** on the reconstruction of a number of Lapita pots. These pots are the first of their kind to be found in relation to human remains, adding greatly to knowledge of the origins of Lapita cultures. We received an ICOM grant to assist with this capacity building project to increase conservation skills in Vanuatu.

Deakin University intern, **Cynthia Loza** is undertaking a review of existing outreach programs in the Asia-Pacific area for the Museum's Outreach program.

Australian National Maritime Museum

The ANMM Conservation Department extends a warm welcome to **Jonathan London** who took up the role of Head of Conservation in January. Jonathan brings an extensive range of experience and skills to the Department and we look forward to a prosperous and productive year ahead under his guidance. Prior to joining the ANMM, Jonathan was contracted to the State Library of NSW from April 2005. Before that he was Manager, Preservation at Archives New Zealand from 1998 until last year.

Sue Frost has been continuing work in preparation for the Textile Re-housing Project, in addition to working as the

conservation co-coordinator for the Halvorsen exhibition. Sue is also monitoring the progress of the Stackpool exhibition, which is currently touring Australia. **Karina Acton** has been working on the conservation component of the Museum's new TMS - Collection Management System. Karina is also preparing objects for the exhibition *Australia under Attack*, which comes to the ANMM in March. **Anliese Treacy** has been working on objects for the Clipper Ship exhibition and preparing a number of Australian War Posters, which will be touring regional Australia from June. Anliese has also been co-coordinating work on the glass plate and nitrate negatives collections at ANMM.

Ian Miles has returned to his duties as Senior Conservator of mixed collections. Ian has been reviewing the draft Disaster Plan and preparing object handling workshops for staff. **Jolanta Grzedzielska** has re-joined the Department on a 3-month contract, working part-time in a mixed collections/preventative conservation capacity. Jolanta has been reviewing data logger information and pest controls in the Museum building. Ian and Jolanta are reviewing the existing environmental controls and monitoring systems within the museum and storage areas. In addition they are preparing various indigenous organic objects for display in the core gallery redevelopment of Merana Eora Nora.

It is with great regret we announce the departure of **Tasha Brown**, who had been working as objects/preventive conservator at ANMM since 2003. We wish Tasha all the best with her career and thank her for all her hard work, dedication and professionalism during her time at ANMM.

ICS

Ursula Sattler joined us from the Bavarian State Folk Museum, Munich in October as objects conservator. She is spending three months at the National Museum whilst **David Hallam** completes his latest book before returning to ICS in May. **Michael Sietz**, an archaeological conservator also from Munich, will take Ursula's position whilst she is away.

Felicity Turner completed her Masters at the University of Melbourne, during which she undertook her internship at ICS. She has joined us permanently as assistant paper conservator working with **Nicole Rowney**. **Adrian Warren** joined ICS as senior furniture conservator in November from the UK, where he has been working privately in The Cotswolds. He is working with **Oliver Hull**.

Adam Godijn continues to build the paintings section, working with **Anna Diakowska-Czarnota** and **Arek Werstak**. Adam is also spending significant time in Canberra working on the Parliament House collection, where Fiona Tennant is simultaneously writing conservation plans for the artworks.

Miriam Wormleaton has decided she has undertaken the most unpleasant treatment in her textiles conservation career, the details of which do not need to be elaborated on, other than to say it involved a stump work box and a dog.

Powerhouse Museum

Both the Exhibitions and Collections teams have been hard at work processing costumes, textiles, paper and mixed media objects for *On the Box: Great Moments in Australian Television 1956-2006*, which opens in April. Paper objects include a number of record covers from albums featuring songs from Australian soap operas and television series, such as *A Country Practice*, *The Sullivans* and *Young Talent Time*. Other objects include board games, books, magazines and a script from the 1989 Australian television movie, *The Bangkok Hilton*.

Pat Townley, **Sue Gatenby**, **Frances Fitzpatrick** and **Mary Gissing** have been working in association with **Sue Valis** from the Australian Museum to develop a unit from a workplace-based training package for the upcoming 6-week internship of two colleagues from the Fiji Museum. Mary and **Kate Chidlow** have also been developing a series of image-based handouts for conservation workshops, particularly for those for whom English is a second language. Preservation staff undertook training in the identification and handling of objects containing asbestos and the Department has also been developing a draft KEmu PHM preservation module.

Kate, Mary, **Gosia Dudek** and **Nadia de Wachter** were once again given the opportunity to admire the beautiful objects associated with *Morris & Co* - an Art Gallery of South Australia Travelling Exhibition, while condition reporting objects during the dismantling. The exhibition of 89 works has now moved to Museum Victoria. Gosia Dudek installed *Japanese Jewelleryx5*, a small exhibition of contemporary necklaces, rings and bracelets made by five Japanese artists. Some of the objects are quite unusual with two necklaces made of dust, several necklaces made of recycled plastic and two necklaces using wood shavings as the main material. **Suzanne Chee** installed *Kylie: An Exhibition* which finally reached Sydney after touring around Australia. Featuring costumes, photographs, costume designs and audio-visuals, the exhibition takes a behind-the-scenes look at Kylie Minogue's international career.

In December Mary, having just completed a Certificate IV in workplace assessment and training, and **Sarah Pointon** (Collection Management) broadened the 'workplace' definition, and became truckies - all in the name of regional programs. During the days of record high temperatures, Sarah and Mary travelled to Nyngan to pick up *Works Wonders*, a small regional travelling exhibition about home remedies. They then installed the exhibition in the culturally dynamic Broken Hill - well worth a visit.

Dave Rockell and **Skye Mitchell** along with **Carey Ward** from Collection Management and Curator **Michael Lea** have been busy with retrieval of the Mastertouch collection. The Mastertouch Piano Roll Company in Petersham, NSW was the last remaining manufacturer of player piano music rolls in Australia, having begun in 1919, and one of only two large-scale producers left in the world. After extensive negotiations with Mastertouch and assistance from the NSW Heritage Office, the Powerhouse Museum (PHM) has acquired this large collection as a donation from its owner Barclay Wright. The collection includes piano roll recording equipment, piano roll making machinery, master rolls, stencils and associated equipment and will be stored at PHM's Castle Hill facility. Over the last few weeks Dave and Carey have been stripping down the piano roll making machinery, which needs to be removed by crane through a small first floor window!

State Library of NSW

Lang Ngo and **Cathryn Bartley** have been treating a large 17th century Dutch parchment map depicting part of the Australian coastline. The map will be displayed as part of the State Library's *First Sight* exhibition, which celebrates the 400th anniversary of the first European discovery of Australia by Willem Jansz in March 1606. The Library will display some of its rare and valuable treasures relating to the Dutch charting of our coasts in the 17th century. The map was surface cleaned, humidified and flattened and is being mounted using a variation of the "Pickwood reverse thread mat" perfected by **Dana Kahabka** for the mounting of the Miranda map which was displayed in the Library's Heritage Collection in 2003. Using this method the map is suspended by a series of twisted threads adhered to the verso of the parchment. This thread mat exerts a gentle, even tension to the parchment sheet.

As part of the ongoing Mitchell Bequest Project, assistant conservators have commenced repair of a collection of cased maps in order to prepare them for digitisation. The maps document Australia's colonies, from the 1800s, and vary in size from one to several square metres. All the maps are lined with linen and had been stored folded, which has caused numerous issues with warping, misaligned tears, and creases. **Martin Bongiorno** and **Jessica O'Donnell** have faced many challenges while humidifying and flattening the oversized maps. Further work by **Silvana Volpato** and **Aileen Dean-Raschilla** has included tape removal treatments and repair of the map cases. The majority of the maps in this collection have required extensive paper repair treatments. The maps are stored in four-flap boxes made by **Annie Jordan**. These maps will be available shortly on the State Library of NSW website.

State Records NSW

Conservator **Dominique Moussou** is on extended leave from State Records while she completes her Masters in Collection Management in Valencia, Spain. Dominique was the recipient of an exchange scholarship to study the conservation and site management components of her degree in Spain. We are eagerly awaiting news from Dominique on how she is going.

Carol Marsh, Assistant Conservator, has begun a new project working on the Deceased Estate files dating from the 1890s. The files are some of the most highly accessed at State Records as they provide family historians with valuable information. This project is similar in nature to the State Ward B files that Carol continues to repair, flatten and re-house.

Elizabeth Hadlow is managing the project to examine and assess the film collections held by State Records. The first consignment of films has been transferred to NAA and is being assessed by **Mike McKeown**. Mike has found some little gems that can now be copied so that the films are accessible to the public. Elizabeth has been working with the Museum of Sydney on preparation work for their exhibition about the Sydney Harbour Bridge. State Records has one of the most significant collections of Sydney Harbour Bridge material including original pen and wash plans, reports, photographs and memorabilia.

State Records welcomed **Frances Cumming** and **Jill Gurnery** in January. Jill and Frances will be job-sharing Dominique's position while she is on leave. They have commenced work on the Colonial Secretaries Correspondence and are also grappling with a number of water-damaged parchments that are part of the Supreme Court Equity records.

QUEENSLAND

State Library of Queensland

Life here continues to be dominated by the redevelopment of the State Library of Queensland building, the Millennium Library Project. This major building venture will result in a facility that will double the size of the previous building. The building, due for practical completion in mid-August 2006, will enable the delivery of newly developed library services in Queensland. To meet these new demands, the Collection Preservation program has completed a process of refocusing its program, to align with current library trends, in particular with regard to its conservation resources.

With twelve display venues, of which three have been designed for exhibition of original heritage collections, the Conservation program will have a very demanding schedule ahead. To help us cope with the increased workload, **Rhiannon Walker**, who comes to us from the National Museum, joined the team as Exhibitions Conservator in November 2005.

One of the constant challenges facing Preservation staff during construction has been the preservation of the collections remaining on the site. As construction work is undertaken around the collections, the risk of building-related disasters is greatly increased. Since construction commenced, there have been several critical incidents. These have resulted in water damage and mould outbreaks where hoardings have impeded air circulation. Fortunately, the State Library disaster teams responded effectively to these incidents and it was particularly pleasing to have a 100% recovery of several hundred sodden calendered books.

An aspect of the redevelopment that we are all looking forward to is the new Conservation lab, which has already undergone many design revisions. The lab will allow for greater flexibility in the type and quantity of conservation treatments undertaken. Planning is underway for construction of a Low Oxygen Chamber that will form an integral part of our new quarantine program for incoming collections. **Vinod Daniel** from the Australian Museum is providing consultation to Collection Preservation staff for the duration of the design and construction phases.

Rhiannon, **Elizabeth Barron** and **Lydia Egunnike** have been working on the content for an extensive preservation display wall. The goal of the wall is to provide an insight into the workings of the Collection Preservation Unit and illustrate deterioration mechanisms and treatment methodologies. The display will be located along the main corridor of the new conservation laboratory.

Grant Collins and Lydia are developing a relocation strategy for the move of the collections from their current transition locations back into the new building along with the operational shift of conservation staff, consumables and equipment.

A number of non-building related projects are also being worked on by Conservation staff. **Sally Golding** is continuing work on the Motion Picture Access Project. This project involves the condition reporting, remedial conservation treatment and indexing of a series of motion picture films in a range of formats. Some of these films are being selected for duplication to video preservation masters on Beta SP, video duping masters on Digibeta, and client access copies on VHS and DVD.

Lesley Berg recently completed the Froud Project, which involved the indexing and rehousing of over 6000 architectural plans. This project has taken over two years.

Shane Bell and **Sidney Furber** have been creating a series of complex storage enclosures for an unusual array of artists' books from the recent exhibition *Sufferance: Womens' Artists' Books*. The rapidly decomposing, electroplated onions and garlic have proved a particularly interesting challenge. Thank goodness we now have an objects conservator in our midst.

SOUTH AUSTRALIA

Artlab Australia

In the textiles lab, **Bee Flynn** and **Kristin Phillips** have been working on three sets of Frances Burke curtains for the Art Gallery of South Australia. The curtains have had a hard life and are suffering from the effects of light exposure and water damage. Treatment has included wet-cleaning, repairs and support of the linings. Kristin and Bee have also been treating a collection of children's fancy dress clothing belonging to the South Australian Migration Museum. These include a young boy's jockey suit, featuring a pair of cream silk shorts with a matching silk cap and also a very cute baby bunny suit, complete with swan skin trim. Bee has also been working on the exhibition preparation of a number of tapa cloths, as they are apparently very popular for domestic interiors this season.

Objects staff welcomed **Mary-Anne Gooden** to the fold as a part-time conservation assistant whilst she is on holidays from her studies in Archæology. Mary-Anne has been periodically volunteering at Artlab for some years and has most recently been assisting with loan approvals and object preparation, and also the surface cleaning and documentation of items prior to display.

Justin Gare has been occupied with a circa 1880's Chinese lacquer cabinet, belonging to Carrick Hill. Overall the cabinet is in fair structural condition, but there are numerous areas where the lacquer is cracking and tenting, with associated minor losses. Justin has been researching and testing appropriate consolidation techniques to stabilise the fragile lacquer.

An almost complete, late nineteenth century homeopathic kit, manufactured by Dr. Willmar Schwabe, donated to the Migration Museum of South Australia, was sent to Artlab for investigation and treatment. The kit is a fascinating piece, being composed of close to 300 small bottles of homeopathic medicines (most still with their contents) neatly packed within a compartmentalised, purpose-built veneered wooden box. **Sophie Parker** has been investigating handling, storage and potential contents disposal (if necessary for safety) options for the medicines, and contacted various Australian institutions for advice and ideas. Megan Hicks, Curator of Health and Medicine at the Powerhouse Museum, has written a fact sheet entitled *Guidelines for dealing with hazardous materials in medical collections*, which was an invaluable guide in formulating a protocol regarding this particular kit.

After Sophie sent a copy of the contents list to Brauer Natural Medicines Pty. Ltd., Allan Snook (from Brauer) very kindly provided a comprehensive list of contents (translated from Germanic Latin to English), their sources or starting materials and a poisons rating. This proved very interesting reading, as it included such sources as fluids from smallpox

and cowpox pustules, whole honey bees, whole starfish and North American rattlesnake venom, to name just a few! Alan assured Sophie that as the medicines in the kit were most likely intended as therapeutic, the dilutions would be so great that they would pose no risk, especially as no one was intending to ingest the "remedies" now. Sophie decided that it was appropriate to keep all of the contents of the kit, after ensuring that their containers were safe within their bottles and that the intended display environment provided was secure, so that none of the bottles could be touched or accessed by the public. As the kit was extremely dirty and its woollen lining had been attacked by both woolly bears and webbing clothes moths, it has required much cleaning, frass removal and other repair work, such as the replacement of paper labels on bottles and some other minor repair work to bottles and lids.

The paper lab has started the year with a mass of activity and changes. It is all hands on deck for the treatment of fifty-four panels of Sidney Nolan's work, *Rainbow Serpent*. The piece consists of six works per panel of crayon drawings with a fragile paint wash on paper. This large work belongs to the Festival Theatre in Adelaide and is on permanent display in the foyer. Conservation treatment involves carefully notating the direction and location of each paper support, removing the work and replacing the mounting material with cotton rag board. Replacing the hinges on the verso of each paper sheet is quite delicate work as the paint is very sensitive to movement! Each frame has been cleaned and fitted with new Perspex. The project will be ready for display in time for the opening of this year's Adelaide Festival in March.

We are having a shift in staff this year. We warmly welcome **Liz Mayfield** full time as a book conservation specialist. We also have **Charlotte Park** joining the paper conservation team in February. Both Liz and Charlotte completed their Masters of Arts in Cultural Material Conservation from the University of Melbourne in 2005.

As it is in with the new, so it is out with the ... (old?) **Anthony Zammit** has retired from Artlab Australia as our rare book conservator. Anthony has had an amazing and distinguished career whilst in Adelaide. He began his career as a bookbinder at the State Library of South Australia, and helped initiate the State Conservation Centre of South Australia (later Artlab Australia) in 1986. He has travelled extensively internationally to build on his skills, and has worked on books such as the Captain Matthew Flinders Journals, Journals of Sir Joseph Banks, a tapa cloth book of Captain James Cook and the *Bounty* Logbooks of Lt. William Bligh. We wish Anthony all the best in his future pursuits; the paper lab will not be the same without him.

We would also like to thank **Heather Brown** for her temporary stay in the paper lab. Heather joined Artlab from the State Library of South Australia as an Assistant Director

in November and has helped manage the paper and objects labs workload.

The Projects section has recently completed cleaning a beautiful stained glass skylight in Eden Park Estate. Installed in the late 1800s, the skylight appeared to have never been cleaned. **Joanna Barr**, **Bee Flynn**, **Rita Bachmayer**, **Helen Weidenhofer**, Sophie Parker, **Morgan Paparella** and **Martin Deckys** all contributed time to the process of swabbing the possum 'guano' and particulate matter crust from the glass. The team worked in the roof cavity, lying on planks elevated above the skylight – in theory a very comfortable arrangement – unfortunately, the project coincided with one of the hottest summers Adelaide has experienced for some time!

Eugene Taddeo, **Chris Payne**, **Marek Pacyne** and **Gillian Leahy** have been collaborating with the Tate Gallery Conservation Department, undertaking examinations of two similar paintings, one from the collection of the Art Gallery of South Australia (AGSA) and the other from the Tate's collection. The Tate has requested information on the painting in the AGSA's collection, titled *Dame Magdalen Pultney, later Lady Aston* by Marcus Gheeraerts. The work in the Tate collection is titled *Gertrude Sadler, Lady Aston* and is from the 17th Century British school. The AGSA-owned painting has been examined using infra red light, while **Keith Fernandez** and **Elizabeth Murphy** produced an X-ray of this large work. Paint samples have also been taken and will be analysed at the University of Adelaide, using the scanning electron microscope (SEM) and Energy Dispersion X-ray (EDX). Information gained from this collaborative research will provide further insight into the two paintings.

Paintings conservators will also be tackling a large fluorescent yellow rhinoceros sculpture by James Angus, owned by AGSA. The rhinoceros is dirty and has numerous stress fractures. Investigations will be carried out to determine why the fractures are occurring and how best these may be remedied and treated. The rhino will also require an overall clean to remove surface grime.

As a continuation of its public education programme, Artlab participated in the Adelaide City Council's *North Terrace Family Day* (staged to coincide with the ever-popular Adelaide Christmas Pageant and aiming to increase the profile of the numerous institutions located in the precinct). Artlab staff designed activities specifically geared to the age demographic anticipated. Around 600 children along with their families, found their way to the front of Artlab and the *Amazing Maze* set up in the courtyard. Young children navigated the maze and found pieces of a giant jigsaw puzzle, which they then helped to complete. Assisting them was an enthusiastic team of aptly named *Preservation Persons*, comprised of Artlab staff, including Rita Bachmayer, Joanna Barr, Heather Brown, **Andrew Durham**,

Keith Fernandez, **Chris Holtham**, Kristin Phillips and **Jodie Proud**. Although the activities were not specifically conservation-related, the day was seen as an important opportunity for public outreach, serving to educate and increase the profile of Artlab and conservation in general, amongst the public.

VICTORIA

The Centre for Cultural Materials Conservation, The University of Melbourne

In mid-January 2006, **Vanessa Kowalski**, visiting conservator at the Vietnam Museum of Ethnology in Hanoi, presented a seminar and workshop on the surveying of museum collections and the museum environment. The program was delivered to Vietnamese museum professionals working at various institutions throughout Hanoi, including the Ho Chi Minh Museum, the Fine Art Museum, the Army Museum, the History Museum and the Vietnam Museum of Ethnology. The program was both theoretical and practical, considering and undertaking various types of condition reports and surveys, which target specific needs and information. In addition to the seminar and workshop, Vanessa continues to assist in the development of a Preservation Management Plan and the Conservation treatment of the Yao shaman ceremonial paintings in the Vietnam Museum of Ethnology collection. Vanessa has been offered a Helena Rubinstein summer internship in the paintings conservation department at MOMA in New York. It is a 10 week program, starting in early June. Vanessa will cut short her time in Hanoi in order to take up the internship. During the summer University vacation, the CCMC employed a number of students on a project for the Public Record Office. Prison Registers suffering old water and mould damage have been treated by brush vacuuming and repairing the pages with heat-set tissue. Some volumes were pulled down for treatment and have been rebound under the guidance of **Louise Wilson**. This project will allow the registers to be digitised so that the information will now be accessible to researchers. The project was coordinated by paper conservator, **Libby Melzer** with the students working in two teams of three. **Travis Taylor** and **Nick Selenitsch** acted as team leaders with the teams made up from **Marika Kocsis**, **Petronella Nel**, **Rebecca Dallwitz**, **Debra Parry**, **Jo Mead**, **Danielle Smelter**, **Raye Collins** and **Katherine Rosenthal**.

Staff in all conservation sections have been involved in the treatment of works from the collection of the Heide Museum of Modern Art, in preparation for the opening of the renovated and expanded museum buildings. A focus of the renovations will be the new Albert Tucker gallery space featuring the recently acquired works of Albert Tucker.

Jude Fraser has been in disaster training mode, delivering training workshops to the staff at the Victorian Arts Centre and the Victoria Police Museum. **Alice Cannon** (now SLV) worked with key staff at the VAC during 2004-2005 to facilitate the development of their Disaster Preparedness Plan. This training session comprised the next stage of the on-going planning.

The CCMC has appointed two recent graduates as interns in paintings and paper conservation. Alex Ellem and Travis Taylor will commence work in early April.

Planning and preparation for the new academic year is well underway. Prospective students undertook the Chemistry Bridging course in November–December last year and enrolments for 2006 are being finalised. Teaching commenced in the last week of February. The first cohort of 15 students graduated at a ceremony on Thursday 9th March.

Museum Victoria

Angeletta Leggio is currently acting as Senior Conservator and is busy reviewing procedures, helping to organise disaster salvage training and supervising University of Melbourne student **Tammille Lye** who has been assisting paper conservation work during the summer holidays. In late 2005, Angeletta completed a comprehensive condition survey of a significant photographic negative collection. Chris Undy from ACMI recently provided training for MV volunteers in use of a Steenbeck editing table to view motion picture film. **Helen Privett** has been working with **Catherine Lovelock** on design and implementation of an updated model of collection disaster preparedness for the Museum, as well as environmental monitoring projects. Helen is also coordinating projects (and all of us) for the Museum's celebration of the Commonwealth Games in Melbourne in March.

Alayne Alvis has been preparing indigenous collection items, particularly diverse textiles, for exhibition and outward loan. Alayne is also conserving historical technology objects for a partly-interactive exhibition *Mathamazing* which will display a range of mechanical devices invented for commercial use (eg. cash registers) and to complete complex calculations prior to the invention of the integrated circuit. **Penny Nolton** spent the latter part of 2005 completing touring exhibition installations, including *William Morris & Co* (with Angeletta Leggio), and extensive condition documentation of diverse objects selected for multiple outward loans.

Sharon Towns, contract paintings conservator, is reaching the final months of hands-on treatment in the Trade Union banner project associated with celebration of the 150th Anniversary of the Eight Hour Day movement. Sharon has completed two of the four historic banners that are being conserved during this 12 month project. The banners are

affectionately known as 'The Engineers', 'The Ironworkers' Assistants', 'The Tramways' and 'The Bootmakers', representing shortened versions of the names of their defunct original trade organisations. **Debbie Spoehr**, contract textiles conservator, will shortly complete conservation treatments and replication of decorative border elements on the 'Tramways' banner. Seven historic banners, plus contemporary Trade Union banners, will be displayed at Melbourne Museum as part of MV's contribution to the inter-institutional Eight Hour Day celebration during 2006.

Michelle Berry has been closely involved with the Trade Union banner project, as well as managing contrasting projects such as the upcoming exhibition *Biganga*, featuring work by indigenous artists Treahna Hamm, Lee Darroch and Vickie Couzens, including multiple contemporary possum-skin cloaks made in regional Victoria.

Finally, thanks to those students (workers and volunteers) who have assisted with projects in the last few months and congratulations to the first graduates from CCMC.

National Gallery of Victoria

The Paintings conservation section is going through a phase of transition. With the retirement of **Linda Waters** last year, and **John Payne** now acting as Chief Conservator, the paintings studio has been reduced to two core positions, held by **Carl Willis** and **Michael Varcoe-Cocks**. **Melanie Vella** has been working in a contract position funded by the Hugh D.T. Williamson Foundation, primarily addressing conservation needs of the Joseph Brown Collection. In order to balance the needs of exhibitions, collection care and loans, we are currently attempting to reassess our schedules and staffing structures.

Megan Phillips and **Sharon Grigg** joined the Frames and Furniture Conservation lab to assist with a range of projects while **Suzi Shaw** was in Japan. Megan successfully undertook the distressing and toning of a beautiful new reproduction frame made by David Butler, for the picture *Yalla-y-Poorra* by Eugène von Guérard. The Hugh D.T. Williamson Foundation funded this project. Suzi and Sharon share a passion and knowledge of Asian lacquer, and they have both been involved in examining and developing a treatment proposal for a 19thC Korean lacquer chest, decorated with mother-of-pearl. Treatment of the chest, which will focus on the stabilisation of insecure elements and the replacement of the largest areas of missing decoration, will be completed for display of the piece in March. **Noel Turner** and **Holly McGowan-Jackson** have been examining a rare example of a frame decorated with native Australian flora, from the picture *Springtime* by Arthur Loureiro, recently acquired by the NGV. This large frame consists of a broad field decorated in an asymmetrical fashion with sprays of actual plant specimens, which were quite possibly applied by the artist in 1890. The plant material that remains is highly embrittled and generally

obscured by layers of "bronze paint", unevenly applied to the surface. Two botanists from the Royal Botanic Gardens, Melbourne kindly visited the lab and examined the specimens with a stereomicroscope. They were able to provide us with general identifications of the various plant material applied originally and as later additions. The original material is characteristic of Golden wattle, *Clematis microphylla* and Red river gum. The treatment and display approach for this unique and fragile frame is still to be resolved.

State Library of Victoria

Conservation and Preservation staff are now consolidated at the State Library of Victoria and headed by **Sarah Slade**, Manager of Storage Conservation and Preservation. Sarah has been overseeing the installation and use of long-awaited new cool stores. Sarah organised disaster training in February which was attended by all staff. **Kim Morris** of Art and Archival delivered the training sessions.

Alice Cannon has been working on items from the Victorian Patent Office Copyright Collection, including photographs taken by Thomas Oswald Madeley, John Bray and William Edward Barnes of the capture of Ned Kelly's gang at Glenrowan, in 1880. These items require cleaning and repair prior to digitisation. This diverse collection also contains commercial labels, illustrations, cartoons and other material that was copyrighted during the late nineteenth century. Alice is also becoming our resident expert on Baxter prints and will be presenting a paper on her research at the AICCM Symposium in Wellington, NZ in April.

Virginia Dahlenburg has been working on the routine conservation maintenance of the picture collection on permanent exhibition and has cleaned portraits of Barry Jones (Pick-a-box winner and Labour politician), Allannah Coleman (art dealer from the 60's) and Maurice Blackburn (barrister and Labour politician).

Catherine McFarlane and **Jean Holland** are writing a paper which Catherine will be presenting at the AICCM Wellington Symposium, discussing the ongoing assessment of material selected for our new permanent exhibition *Mirror of the World*. This exhibition showcases many of the rare and historically significant books in our collection.

Katrina Ben has completed treatment on a 16th Century Herbal volume, which forms the basis for her paper to be presented in Wellington.

Staff have been involved in the installation of the temporary exhibition by SLV Creative Fellows; John Wolseley and Peter Lyssiotis - *Lost and Found*. This has been an opportunity to work with the artists and their artworks, produced as a result of their fellowships in the SLV. The next temporary exhibition scheduled at the Library will be the touring *National Treasures from Australia's Great Libraries* opening in March.

BigStuff Seminar

1 – 2 December 2005, Australian War Memorial

Joanna Barr, Artlab Australia

BigStuff. It is such a great expression for large technology objects (cars, planes, tanks, buses, helicopters, trains), those items that tend to take up a lot of space and generate intense debate about 'should they operate, or not?' However, if deciphered literally, BigStuff could be understood as *Big: large, of considerable size; Stuff: unspecified material, worthless objects*. It follows that trying to obtain approval to attend a seminar on the conservation of 'large worthless objects' could take some convincing. Fortunately, I was successful in this endeavour – as were sixteen others.

The *BigStuff Seminar* was a follow up to the extremely successful *BigStuff: Care of Large Technology Objects* workshop held at the Australian War Memorial in 2004. The *BigStuff Seminar* ran over two days at the Memorial's Treloar Technology Centre in Mitchell. It was pitched as a seminar focussing on the assessment, conservation and maintenance of a real life large technology object.

The seminar was run by the Memorial's large objects conservation team and supported by the Memorial's curators, object handlers and marketing staff. The participants were a balanced mix of conservators, tradespeople, curators, museum directors and designers. The diverse backgrounds of the tutors and participants was particularly pertinent, as the conservation of large technology objects requires a synergistic collaboration between these groups. Many of the attendees were from military museums, however there was a good representation from 'civilian' museums, thus ensuring a range of perspectives on the issues discussed.

On day one we were confronted with four very large objects – an Iroquois helicopter, a Japanese tank, a wrecker truck and the bridge sectioned from a large ship. It was clear that the War Memorial were not mucking around.

The seminar was divided into four half-day sessions. We were separated into four groups and each group assigned an object. Each group spent one session with an object, the groups were then split up and everyone sent to a new object and new group for the next session – except for one person, who stayed behind with an object ensuring some continuity between sessions. This meant that most people spent one session with each object and had the opportunity to work with most of the other participants. It sounds very confusing, but it somehow worked seamlessly.

Each session commenced with a short presentation, followed by an hour or so assessing the topic in the context of one of the objects, and concluded with group presentations. A Memorial conservator facilitated each group and the senior curator, object handler and marketing specialist rotated between groups. The four sessions focussed on:



1. What is the object (physically and historically)?
2. What is the condition and what treatment is required?
3. How will the object be displayed?
4. Marketing and the project plan.

The War Memorial had clearly thought the structure of the seminar through very carefully. The information from each session fed into the next session, until a comprehensive 'hypothetical' plan for the object was developed. When combined, the four sessions provide a systematic approach to the conservation of large technology objects, which ensures that all of the pertinent issues are considered. At the end of the seminar, we had the sense of having worked through the process for all four objects, and an understanding of how this might be applied in our own context.

For me, one highlight of the seminar was a tour of the large objects store. We were first shown the impressive array of object handling equipment owned by the Memorial. This evolved into a full tour of the store – and even if you aren't inspired by rows of cannons, planes, ships and the like, the generic trolley storage systems developed by the Memorial provide an incredible prototype for simple, space efficient and adaptable storage.

I thought that one of the great outcomes of the seminar was the opportunity to work with most of the participants and the collegial atmosphere this generated. Accordingly, the structure engendered the collaboration required for the conservation of large technology objects, and demonstrated to all the benefits of this approach.

So, despite the potential interpretation of the name, there was indeed nothing worthless about the BigStuff seminar. It provided a fantastic opportunity to focus on the conservation of large technology objects for a couple of days, and to exchange ideas with colleagues dealing with these collections. Congratulations to the team at the Australian War Memorial for hosting another successful BigStuff event.

The Dilemma of Conserving 20th Century Furniture Finishes

Greg Peters, furniture conservator and restorer in private practice,
Patinations Furniture Conservation Services, Canberra

Furniture conservators are first in the firing line when it comes to questions and problems associated with failing and problematic finishes on furniture and interior timbers – it is part of our job description. The past 70-80 years has seen rapid advancement in the technology and materials used in coatings. As a young nation many of our iconic architectural structures and designed furniture have been finished with what have been state of the art formulations; modified resin/shellac coatings in the early 20th Century, the total transformation of furniture finishing with spray applied nitro-cellulose lacquers, the introduction of polyurethanes and polyesters, and now the latest technology delving into water borne finishes and even nano science being employed in coating technologies.

The simple days of treating French polish, shellac and waxes are happy ones, but as furniture conservators, restorers, curators, collectors and furniture buffs alike, we have a responsibility to ensure that future generations of Australians can appreciate and enjoy the furniture legacy our 20th century cabinet makers/designers have contributed to our young furniture heritage. This begins with identifying and understanding the materials used in manufacture.

The dilemma starts when one considers that there is no training for furniture conservators within Australia and even those abroad are mainly training and concentrating on 19th century furniture and technologies. When it comes to saving a degraded nitro-cellulose or polyurethane there is much to

learn. The science/chemistry involved is complex and although we can adopt elements of technology from paintings and object conservation, this is only applicable to static furniture in protected environments. In functional situations or even in a museum environment where these finishes cannot be saved, the questions arise, 'with what should these finishes be safely removed and secondly, with what should these objects be re-finished?' These questions plus many more have either been ignored or may have never needed asking until recently. In late 2005 I set out on a worldwide quest to find answers to these questions. Furniture conservators, conservation scientists, paint and polymer scientists, paint companies and curators/collectors of 20th century furniture were all on my hit list.

I am grateful to the International Specialised Skills Institute (ISS Institute) in Melbourne who had the foresight to see that these issues are indeed serious ones that have already affected and will affect many of our most iconic building interiors. These problems are vast when we take into consideration how much timber has been employed and clear coated within our buildings throughout the 20th century. The uses of veneer and fibre or particleboard add further complication to the scenario with treatments and removals designed to selectively remove coatings but not adhesives.

Like other disciplines of conservation where modern materials are involved, the materials we are trying to preserve were not designed to last a life time, thus the common dilemma occurs and the million dollar question raised, 'how are we going to make them last?'

The ISS Institute provided \$8000.00 of funding for my research that targeted institutions and individuals who expressed interest in this subject when contacted. My itinerary included visits to the following institutions that lasted from one day up to a week.

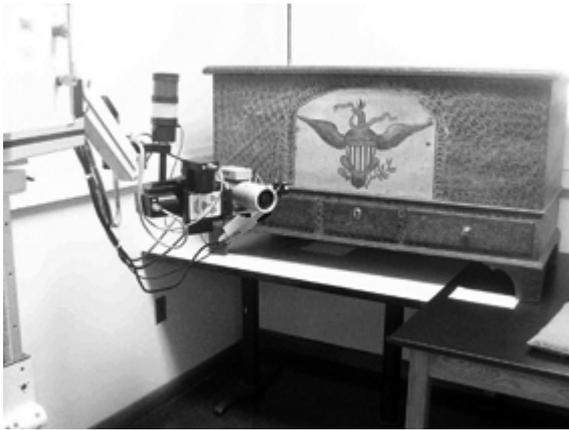
Royal Collection workshops at Buckingham Palace.

Looking at important furniture that must stand up to high traffic use in public and state functions etc. Contact: David Wheeler, Senior Conservator.

Windsor Castle. Inspecting the refurbishment of post fire Windsor 1993. Beautifully executed traditional wood paneling, carving etc, finished in water borne lacquer



Furniture Conservator Richard Thompson working on a door from The Gates cabinet made for King George IV's apartments in Buckingham Palace, 1781. Royal Collection Workshops, St. James Palace.



Identifying original coatings on a painted Pennsylvania blanket chest using XRF Spectroscopy. Winterthur Museum, Delaware.

which today is a disaster. Contact: Adrian Smith, Head of Conservation and president UKIC furniture division.

Victoria and Albert Museum. Meeting with Senior Furniture Conservator, Shayne Rivers and Polymer Scientist, Brenda Keneghan to discuss issues relating to these problems.

Buckinghamshire University, Furniture Conservation and Restoration faculty. Delivered illustrated lecture to students and staff identifying 20th century finishes as an area furniture conservators need to concentrate on. Contacts: Course Leader, Paul Tear, and Head of 20th Century furniture research group, Professor Jake Kanner.

Tikkurila Coatings, Helsinki, Finland. Tour of plant followed by meetings with research and development chemists and discussion relating to new coatings technology. Visit to Tikkurila's private coatings museum.

Evetk University, Conservation Department, Helsinki. Discussion with staff and students as to how they are conserving Finland's rich design heritage and vast amounts of interior timber. Contact: Head of the Conservation Studies, Tuula Auer.

Private Association of Finish Conservators/Curators and Collectors Specialising in 20th Century Furniture, Helsinki. Discussions on the complexities surrounding maintaining collectable furniture in functional condition without diminishing its historic integrity or financial value. Contact: Private conservator, Annika Bertlin.

Smithsonian Centre for Materials Research and Education, Washington DC, USA. Technical and practical research into new formulations for coatings on large interior timber veneer sections in iconic buildings. Contact: Senior conservator Prof. Don Williams.

Winterthur Museum, Delaware, USA. Inspection of research facilities and analytical laboratories. Contacts: Furniture Conservators Prof. Greg Landrey, and Prof. Michael Podmaniczky. Meeting and discussion with

conservation scientists Prof. Richard Woblers and Dr. Susan L. Buck, in relation to surface coatings, selective removal systems and possible replacement finishes.

Returning to Australia just prior to Christmas with a massive back log of work to get through, I have not had time to compile my findings which will be written as a report available through the ISS Institute. In addition, I will deliver a number of lectures later in 2006 in Melbourne, Sydney and Canberra, of which the AICCM membership will be informed.

The level of interest internationally is high and although I did not discover definitive answers to the questions I raised, I am happy in the knowledge that these problems are not ones I face alone. The solution to these problems are not just a conservation issue, when it comes to building interiors and art furniture, these problems are on a massive scale which will require the collaboration of conservators, maintenance teams, chemical and paint industries plus relevant scientists/chemists to develop safe and economical processes which will best preserve our important heritage interiors and hopefully overcome the likelihood of such problems arising in the future. Working toward solutions to solve these problems may not only save our iconic structures from deterioration, but also from the huge financial expense that is currently spent on the upkeep and maintenance of clear coatings, often resulting in difficult removal and refinishing processes every 10 years or so. As well as being a burden on budgets, this constant renewal of coatings ultimately diminishes the very thing they are trying to preserve.

I am looking forward to sharing my findings in the near future. I invite anyone interested in this field of conservation to contact me as I think this is a huge area of growth for interested conservators and I would hope that Australia has a role to play in future developments.



Materials research Lab, Smithsonian Centre for Materials Research & Education. Washington D.C.

Cold Climate Conservation

Julian Bickersteth, ICS

The conservation of the historic huts of the Ross Sea Region in Antarctica, built by Borchgrevink, Scott and Shackleton between 1898 and 1911 has involved Australian conservators from the beginning of the current program in the mid 1990's. Peter Maxwell, Sarah Clayton, Andrew Viduka and Julian Bickersteth have collectively spent over a dozen summer seasons on the ice. With significant funding now in place, the Antarctic Heritage Trust of NZ, which is responsible for the care and preservation of the huts, has contracted ICS to manage the artefact conservation program. The treatment of the 15-20,000 artefacts left behind by the expeditioners is expected to take at least five years. The decision has been made to undertake most of the treatment in a purpose built lab at Antarctica New Zealand's Scott Base, rather than transport all the artefacts to Australia or New Zealand. Fiona Tennant from ICS has designed and equipped the lab.

A global search for conservators prepared to spend seven months wintering over at Scott Base (three months of it in 24 hour a day darkness) resulted in 34 applicants, and the appointment of three conservators. Sarah Clayton from the Australian War Memorial will lead the team, and will be joined by Ainslie Greiner (recently graduated from the University of Canberra) and Nicola Dunn from the Museum of London.

Doug Rogan of ICS has spent the early part of the summer working with Robert Clendon, formerly of the Australian National Maritime Museum packing artefacts at Shackleton's Hut at Cape Royds. These were transported back by sled to Scott Base, where the three conservators will work on them between February and August.

Such a project has not been attempted before in the southern or northern polar regions, and we will continue to report on progress in future editions of the Newsletter.

Next Issue

Vanessa Kowalski from the Centre for Cultural Materials Conservation is presently working on an AYAD Program at the Vietnam Museum of Ethnology (VME) in Hanoi. The project, *Establishing conservation and ongoing preservation management procedures for religious (shaman) Zhou manuscripts within a living cultural framework*, will assist in the development of a Conservation and Preservation Management Plan for approximately 200 manuscripts, books, scrolls and other materials, emphasizing their living cultural context. Vanessa has been working with staff from the VME and collaborating with local communities to ensure community participation in the decision-making processes for the Conservation Management Plan. Vanessa will report on this project in the next newsletter.

The editorial committee welcomes submissions from all members – reviews of conferences, workshops, literature; news on projects and research activities. All submissions will be considered. Contact us prior to the May 1st deadline for the June Newsletter.

Web News

Those who use marbled papers may be interested in Joan Ajala's business, www.marbledpaper.com.au. As well as a variety of traditional and modern patterns, Joan can also attempt to match old papers, for book repairs. See her website for further details.

Laser Cleaning for Heritage Artefacts

Alison Wain, AWM

Short pulse laser cleaning

In 2005, a group of heritage institutions joined with laser scientists at the Australian National University to submit a proposal for an Australian Research Council grant to investigate the potential of short pulse lasers for conservation cleaning. Happily, the proposal was accepted and has received funding for the next three years.

The goal of this project is to develop short-pulse laser cleaning technology for selective removal of surface contamination from heritage artefacts in Australian collections. Short pulse lasers differ from conventional conservation lasers in that the energy of the laser breaks bonds in the target (contaminating) material without generating heat in the substrate. This means they are free of the heat related problems of conventional lasers (melting, boiling, thermal degradation of the substrate etc). They also remove material in layers of molecular thinness and can be controlled by real-time analysis and feedback to ensure that the laser stops as soon as it has reached the surface underlying the contaminant.

The project partners are

- Australian National University - Dr Ken Baldwin and Dr Andrei Rode
- Australian War Memorial - Alison Wain
- RAAF Museum (Pt Cook, Vic) - David Gardner
- Army History Unit - Capt. John Land
- Dept of Defence (Naval - Spectacle Island) - Commander Shane Moore
- Art Gallery of NSW - Stewart Laidler
- Artlab Australia, S.A. - Joanna Barr

The partners met in January to plan the first phase of the project, which will consist of setting up and configuring the laser system, followed by testing on a range of sample materials provided by the conservation partners. Later stages will involve tests on increasingly complex samples and real objects and development of a real-time analytical feedback system to control the laser. Collaboration with scientists in France is also planned, to study the possibility of using the laser to safely remove and capture radioactive material from the surface of heritage artefacts.

For further information on this project, please contact Alison Wain on 02 6243 4490 or alison.wain@awm.gov.au

The grant also provides for the employment of a PhD student. Due to the late announcement of ARC grants last year, the project is still looking for a suitable applicant. Interested students should have a background in physics or chemistry and are invited to contact Alison Wain or Dr Andrei Rode avr111@rsphysse.anu.edu.au for further information.

Long pulse laser cleaning

In contrast to the short pulse lasers discussed above, the laser cleaning systems already widely used overseas in conservation use a relatively long pulse length and therefore can damage vulnerable materials through the heat they generate. However they do have their place and are especially successful on robust materials such as stone and metal, being used to remove material such as dirt, graffiti, biological material and old coatings without destroying fine details or surface patinas.

The opportunity to experience and evaluate long pulse lasers first hand would increase the understanding of these tools and their potential benefits for Australian collections. Planning is therefore underway for a series of workshops to be held in October 2006 in Canberra, Melbourne, Adelaide and Perth. These workshops will have the new Compact Phoenix Nd: YAG laser from Lynton Lasers available for hands-on trials, as well as (funding permitting) the Laserblast 50 from Laserclean.

If you would like more information on these workshops or would like to receive updates about new developments in lasers for conservation in Australia, please contact Alison Wain on 02 6243 4490 or alison.wain@awm.gov.au

Near Infrared Reflectography (NIR) Still Photography with digital SLR cameras

Sean Loughrey, The Centre for Cultural Materials Conservation

After checking a request on the conservation distlist about digital cameras and their ability to work within the near infrared range NIR (over 700nm – 900nm) it was recognised that our own digital camera would be capable of IR photography. After working with the vidicon system I had not really explored digital still IR.

The request on the Conservation DistList was: "We are considering the purchase of an infrared enabled digital SLR camera, to photograph paintings when infrared reflectography mosaics cannot be justified."

The response was that "standard Nikon digital SLR's are known to transmit sufficient amount of IR above 700nm (and likely, at least out to 900nm) to permit relatively good IR photography."¹

This exchange led me to explore the possibilities of our Nikon Digital camera. This capability would enable us to develop a portable IR set up which a conservator could easily transport to off-site projects, collections and artworks which might not necessarily be transportable to a lab for analysis. This has been a problem that we have tried to address by looking at smaller, more portable vidicon systems, but the digital camera setup would be smaller and allow for still images, especially details, to be directly downloaded to a computer or laptop on site to be analysed immediately, with a better resolution and without mosaicing.

Our tests were done with a Nikon D70 which has sensitivity in the infrared region at least up to 900nm and potentially sensitive to longer wavelengths (over 900nm up to 1600nm) with some adaptations to the camera. There seems to be ways to adapt cameras to be more sensitive by removing the IR blocking filtration built into the camera but this might become problematic and probably not necessary, especially if the camera becomes useless for daylight photography.

Lenses: 1. AF-S Nikkor 18-70mm (versatile lens)
2. AF Micro Nikkor 60mm (detail shots, better resolution than the vidicon system)

Filters: Kodak Wratten gelatin filter - IR d 80A
Kodak Wratten gelatin filter – IR No. 87 (750nm)
Hoya R72 (720nm similar to Wratten No. 87)
These opaque filters pass infrared radiation coming from the subject and blocks or excludes visible and UV light.

Lamps: Halogen lamps – High intensity Infrared lamp with an IR-D80A filter which transmits radiation from the NIR within the region of more than 850nm. If you're not precious about the object, two irons can be used to provide radiation for reflectography.

Exposure (using a tripod):

My exposure times, so far, have been crudely worked out, determined by information gained in the LCD display. On the Nikon D70 as with other SLR digital cameras, there is setting called 'bulb' for long exposures in the 'manual' mode. Anywhere between 5 – 10 seconds has worked well, bracketing is the best way to go and is simple when you see results on LCD display. (With the Albert Tucker date, I was able to determine whether I was getting the information I was chasing within a few exposures). It is worth bracketing extensively. Both filters worked well although focusing must be done before you insert the filter. The great thing with digital is you can test and trash as much as you like. This was never possible with film.

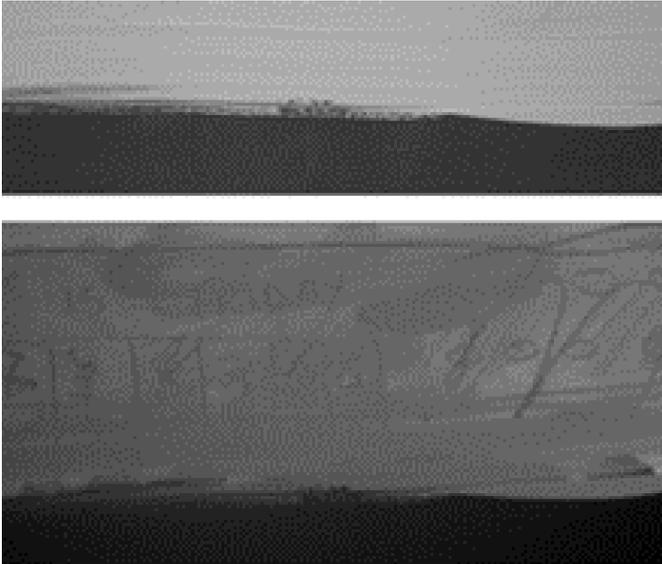
Focus:

Focus with infrared and UV is slightly different since we are not focusing on visible light. "When infrared is used to form an image, the focal length of the lens is longer than specified; when ultraviolet is used, it is shorter."² A red filter can help focusing for infrared since the "pure red focus of a lens is closer to the infrared focus than the usual blue – green visual focus"³

¹ Conservation DistList Instance 19:29. Distributed: Tuesday, December 6, 2005. Message Id: cdl-19-29-008 Dan Kushel, Distinguished Teaching Professor, Art Conservation Department, Buffalo State College, 1300 Elmwood Avenue, Buffalo, NY 14222

² Ultraviolet & Fluorescence Photography. Kodak publication, 1972

³ Applied Infrared Photography. Kodak publication, 1977



Test panel showing visible paint layer at top and digital NIR (5 second exposure) image at bottom

We also had success with IR transmission (transmitted infrared radiation) from the verso of a canvas, but exposure times should be longer, at least 20-30 seconds.

UV and digital SLR cameras

Photography of artworks under ultraviolet with a UV Lamp (365nm long wave and 254nm short wave or ‘far ultraviolet’ defined by its distance from the visible spectrum) can be achieved simply, in a darkened room with the lamp fluorescing the subject and with a long exposure, again bracketing is the key.

There seems to be a lot on the Internet about IR (and UV) photography, not Conservation IR/UV but useful information to help refine set ups and confirm which cameras are sensitive in the NIR and UV region or different filters. Out of all the websites I checked the one that seemed most relevant to Conservation (there is probably more) was <http://www.msp.rmit.edu.au/> This site is offered to Students Doctors and Scientists, so the information is well researched and well worth supporting. Obviously more detailed work is yet to be done but the possibilities are definitely there.



Albert Tucker *Street walker, Paris*, gouache, oil pastel, brush and ink, synthetic polymer paint on paper. Private collection, Melbourne
 Above: Digital NIR image revealing the date as “49”. The work was previously catalogued as “Circa 1948”.



Above: Detail of NIR image of lower right corner of Albert Tucker *Street walker, Paris*, gouache, oil pastel, brush and ink, synthetic polymer paint on paper. Private collection, Melbourne

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Paintings SIG News

Insights and Intuition

10th AICCM Paintings SIG Symposium
4-5 May 2006
Queensland Art Gallery
Brisbane

A call for papers went out last year and registrations are expected to open in March. Would anyone who wishes to contribute but who has not yet contacted the organisers, please do so as soon as possible so that the program can be finalised. Please forward a title and abstract of the proposed paper, including your name and contact details, to:

Gillian Osmond
Conservation Department
Queensland Art Gallery
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4th AICCM Symposium

Conservation of Paper, Books and Photographic Materials

Wed 19 – Fri 21 April 2006
Te Papa Tongarewa
Wellington New Zealand

The 2006 Symposium is being held at Te Papa Tongarewa Museum of New Zealand in Wellington during the week following Easter weekend.

The Symposium will take place over 3 days. The specialty areas of paper, book and photograph conservation will be evenly represented in an interesting 2 day programme of papers. The 3rd day has been set aside for workshops.

Registration forms and a confirmed programme of speakers and workshops are available at:
NZPCG www.conservators.org.nz and AICCM www.aiccm.org.au websites.

For information about Wellington, visit <http://www.wellingtonnz.com>

This site has extensive accommodation listings which can be booked online, as well as maps and general information about sights and activities in and around Wellington.

Inquiries to: preservation@natlib.govt.nz

POLYPROPYLENE FOR LONG TERM STORAGE



TYPE 1 P150
380x150x260mm

\$2.95 each
(inc GST)

any quantity

- **UNLIMITED LIFE**
- **INERT BOX INTERIOR**
- **WATER RESISTANT**
- **NO FINGER HOLES**
- **STACKABLE**

- **SPINE POCKET - ESSENTIAL FOR LONG TERM STORAGE**
- **ACID FREE • METAL FREE • ADHESIVE FREE • WILL NOT ROT OR GO MOULDY**
- **NOT EATEN BY RODENTS OR VERMIN • PROTECTS CONTENTS FROM WATER AND DUST**
- **ENVIRONMENTALLY FRIENDLY • FULLY RECYCLABLE**
- **NO TREES WERE CUT DOWN AND NO ANIMAL BY-PRODUCTS USED IN MANUFACTURE**

THE NEW TYPE 1 P150 BOX HAS BEEN DEVELOPED TO MEET OH&S AND PUBLIC RISK ASPECTS RE WEIGHT HANDLING.

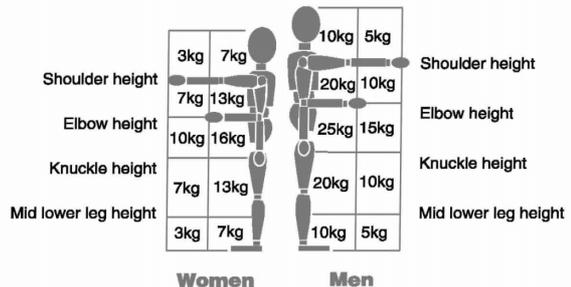
**HANDLING BOXES IN ARCHIVES
THE OH&S FACTORS**

COMMENTS

The chart at right suggests that, for women, the desirable handling weight for boxes that have to be put on shelves - often above waist height - should be 7kg.

The 150mm wide Albox Type P150 are designed to take 7kg of paper when fully loaded.

Source: U.K. Manual Handling Guidance on Regulations 2nd edition



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The AICCM National Newsletter is the quarterly newsletter of the Australian Institute for the Conservation of Materials (Inc.)

It is issued to all members as part of a membership entitlement in March, June, September and December.

Deadlines for copy are:

1 February
1 May
1 August
1 November

Contributions are welcomed and should be sent to:

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Classifieds

\$0.88 per word including GST.

Notices pertaining to AICCM activities are free of charge.

Advertising for inclusion in body of Newsletter accepted until the 1st day of the month in which the Newsletter is due. Early booking preferable.

Disclaimer: Publication of technical notes or articles with reference to techniques and materials does not necessarily represent an endorsement by AICCM. Whilst every effort is made to ensure the accuracy of content, the Editor and the AICCM National Council accept no responsibility for the content or opinions expressed in the AICCM National Newsletter which are solely those of individual contributors.

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