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THE CANTERBURY DISASTER SALVAGE TEAM
Working Towards Saving Cultural Collections

NEWSLETTER

Number 26

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Editor

Cynthia Cripps

Canterbury Disaster Salvage Team Annual Workshop The Safe Display and Exhibition of Artefacts 18-19 April 2002

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INTRODUCTION

LIBRARY

Every other year the CDST holds an intensive two day workshop. For 2002, the subject for the workshop was safe methods for supporting museum and archival collections while on display. While control over environmental conditions such as relative humidity, temperature and light is important, it is equally important that an object receives adequate physical support as well. Providing proper physical support for objects on exhibit often requires creative problem solving as curators, exhibit designers and conservation specialists work to express the vision of the exhibit while ensuring that the objects are not put in harm's way in the process.

Presenters used a combination of lectures and hands-on sessions to cover four topics. Dave Ashman covered the topic of displaying books and archival materials and Joy Culy discussed displaying a variety of soft objects such as clothing and basketry. For objects made of harder materials like wood, stone or metal, Sebastian Denize presented techniques for fabricating metal mounts and Cynthia Cripps presented methods for creating mounts using Perspex.

The workshop had a full attendance, with lectures in the morning and hands-on sessions in the afternoon. While attendees were limited to one hands-on session, whenever possible organisers encouraged participants to wander around to the other groups and "have a look". Additionally, at the end of the workshop each group presented their work to the other participants.

All members of the committee were happy to see that the majority of comments from the course evaluations were positive. The few criticisms received were all constructive ones and will be incorporated into the development of future workshops. The CDST is a completely volunteer organisation, but strives to improve the quality of its workshops whenever possible. The evaluation handed out to participants at the end of each workshop is a source of valuable feedback and the CDST committee members wish to extend thanks to all who took the time to complete the form.

The members of the CDST committee would also like to acknowledge the assistance of Te Papa National Services who provided partial funding for this workshop.

COMMITTEE MEMBERS:

Lynn Campbell, Robert McDougall Art Gallery
Cynthia Cripps, Canterbury Museum
Jill Durney, Macmillan Brown Library
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WORKSHOP TOPICS

General Principles

The workshop was devoted to issues of physical support for objects on display. All of the following discussions assume that environmental conditions are controlled to current standards of best practice for museums and archives¹.

- A thorough examination of the object is necessary prior to designing the mount in order to determine what areas/components are strong and which weak. Weaker areas will require a mount that provides full support, but be careful to avoid a mount that provides support to weak areas while putting other areas at risk.
- If objects are to be hung or propped up, do so using the strongest areas and spread out the stress. For example, hang a textile using a mount attached evenly along the top edge, not just to the corners. Avoid using any handles, ties, or loops as these are generally weaker areas having been used extensively during the life of the object.
- If the mount requires that the object be tied in place, do so loosely. Tying an object too tightly can result in significant damage. Also make sure that the tie is not holding the weight of the object, but simply holding the object in place.
- Avoid having rough or abrasive surfaces in contact with the object.
- Avoid having any painted or varnished surfaces on exhibit furniture/hardware/mounts in direct contact with the object. Even if they appear dry, over time the paint or varnish can stick to the object. Mylar is commonly used as a barrier between objects and painted/varnished surfaces.

Materials – General Discussion

In the construction of mounts and surrounding exhibit hardware/furniture, it is important to use only materials that have been proven not to cause damage to heritage collections. Damage is not always immediately visible and can often accumulate over time. Conservation scientists in various international conservation laboratories regularly test new materials to ensure that they are safe for use in storage and exhibition. Publications of their findings are available for purchase through the internet or via post².

If you are unsure of the composition of a commercial product, Material Safety Data Sheets (MSDS) can be a useful tool. Most suppliers will produce them on request, but if that's not an option there are several internet sites that provide access to MSDS databases².

A MSDS lists a product's constituents along with any associated health risks. However, the forms can be

difficult to read if you are not familiar with chemical terms or risk testing methods. However, it's still worth getting copies as some companies are now producing more user friendly versions. If the MSDS does not provide the information you need, get in contact with a company representative or conservator who can provide more information or help you with the form.

Fabrics:

- Good – cottons (pure or blends), polyester and a selection of other synthetics. These do not emit harmful vapours that can deteriorate heritage collections – especially metals. But be careful of any coloured fabric (see Dye Transfer below).
- Okay – silk. Silks can cause problems with dye transfer (see below).
- Not Good – linen and wool. These do emit harmful vapours.
- Dye Transfer – any coloured fabric (i.e. not white or natural) has the potential of staining heritage objects. Fabrics that have been 'over-dyed' or that do not form a strong chemical bond with the dye compound can stain the surface of an object if it is in direct contact. This is especially true during conditions of high humidity or if the fabric gets wet.
- A simple way to test if a fabric has a dye problem is to completely wet a small sample (warm water works well), sandwich it between two pieces of blotter paper and put the whole lot under a heavy weight (like a big book). Leave overnight. If the blotter paper is stained in the morning, don't use the fabric.
- Washing – most manufacturers treat fabrics with various solutions to make them look more attractive to the customer. To remove these solutions, wash fabrics in hot water prior to using. Washing with laundry soap is not usually recommended as residues are often left behind that may affect objects nearby or in direct contact.

Wood:

- There are many factors to consider in choosing wood products. All wood products are problematic, but each for different reasons. More detailed discussion of the use of wood in exhibits is beyond the scope of this newsletter. More information can be sought from a local conservator or through a search of the conservation literature.
- All wood products used for exhibit furniture/hardware, must be sealed by coating with a conservation approved paint or varnish³. Wood and the adhesives in particle boards and plywood, emit vapours that are extremely harmful to heritage collections, particularly metals.

Metals:

- Metals are discussed in the below section "Metal Mounts for Display".

¹ Standards vary depending on a wide range of factors including: the object's material composition and the length of the proposed exhibit. However, a relative humidity of 50%±5 and a temperature of 21°Celsius±2 are acceptable for most objects. Light level standards are more complicated and depend on the type of object. It is best to consult a conservator for information particular to the objects being considered.

² Websites are listed on the last page of this newsletter.

³ Most acrylic water-based paints/varnishes are safe. It is recommended that a minimum of two, but preferable three coats be applied and that a drying time of one month has elapsed after the last coat before the item is put in the same location as an heritage object. Again, consult a conservator for more thorough information.

Plastic/Foam:

- Plastic and Foam are commonly used as a construction material for furniture, mounts and props in exhibits. Many foams and plastics are made of the same material, but have been put through different manufacturing processes to produce different products.
- Plastics and foams to avoid are those containing polyvinyl chlorides (PVC), polystyrene (PS) and any type of urethane.
- Safer plastics and foams are those made from polyethylene (PE), i.e. Ethafoam, and polypropylene (PP). Other plastics that can be used are polycarbonate sheet, Mylar, and Teflon.
- Perspex is also a safe plastic for use and is discussed in the below section "Perspex Mounts for Display".
- If you are considering a plastic or foam not listed above, contact a local conservator or seek information from the conservation literature and conservation sources on the internet.

Adhesives:

- Do not use adhesives in direct contact with the object. Allow sufficient time for the adhesive to dry/set completely before installing the item into the exhibit.
- Many adhesives give off fumes that can damage heritage objects. Examples are white glues (polyvinyl acetates) and some epoxies. (Although it may be necessary to use the first two in fabricating exhibit furniture, etc. Further discussion with a conservator may help clear up any confusion.)
- Examples of safe adhesives to use are hot glue (clear sticks only), double sided acrylic tape, and acrylic emulsions (e.g., Lascaux).
- A conservator may be able to help with finding particular products that fit the above criteria. Information can also be found in the conservation literature or from conservation sources on the internet. Since many of these sites originate from outside New Zealand, it may be necessary to find out what is the local equivalent of an international brand.

BOOKS

David Ashman, Triptych Conservation Services

- Books are very sensitive to light exposure.
- Design the mount to support the spine and back equally.
- Do not force a book open wider than it opens naturally. Doing so can break the spine or cause other damages.
- If it is not necessary to open the book to a specific page, open it to the place to which it falls open naturally.
- Mylar strips are a good way to hold pages down if necessary. Be careful not to wrap too tightly – just enough to hold the pages in place. If the strips are wrapped too tightly they may cause damage.
- Use acid-free card and/or Perspex to make mounts.

- Avoid use of adhesives, like double sided tape where they could contact the book.

SOFT OBJECTS

Joy Culy, Triptych Conservation Services

- Objects made from soft materials need a high degree of physical support to prevent damage while on exhibit.
- Examples of such objects include textiles, basketry, costume etc.
- Don't create internal supports that "over stuff" the object. Support should be enough to just fill the shape without straining any components.
- Design internal mounts to be inserted into the object without stressing areas around the entry point. Mounts may need to be made of several interlocking parts.
- If the object is to be hung, don't hang from single points or weak areas. Use a mount that spreads the strain evenly over the entire top edge. Do not hang at all if the object is damaged or deteriorated.
- Flat textiles can be displayed flat on an angle (usually 5 to 15 degrees). A covering fabric on the mount will help hold the object in place. Choose a fabric with an adequate knap (surface texture) to grip the object and hold it in place.
- Mounts for most soft objects can be made using a combination of Ethafoam carved to shape, with a layer of polyester quilt batten for padding if necessary.
- Always cover a mount to prevent it from catching on the object and damaging it. Fabrics such as polyester-cotton knits work well.

METAL MOUNTS FOR DISPLAY

Sebastian Denize, Canterbury Museum

- Good for making fine delicate mounts for objects made of harder materials that don't require extensive physical support.
- Bare metal should not come into direct contact with an object. Metals can scratch or dent the surface of an object. Metals also corrode and this corrosion can damage or stain objects as well. If the object is made of metal, contact with the mount may cause the object to corrode.
- Polyester felt, heat-shrink tubing (polyolefin) or plastic powder coating (polyethylene) can be used as a barrier. Areas of the mount not in contact with the object can be painted using an acrylic paint if necessary for aesthetic reasons.
- Brass – easier to shape and weld without heavy duty welding equipment, but not that strong.
- Steel – stronger, but more difficult to shape and needs specialised welding equipment.
- Small mounts can generally be made in-house using brass, while larger mounts requiring steel are better done by external contractors specialising in this material.
- Jewellery classes are a good way to gain skills needed for welding and shaping brass.

PERSPEX MOUNTS FOR DISPLAY

Cynthia Cripps, Canterbury Museum

- Good for soft or hard objects.
- Perspex is a polymethyl methacrylate plastic.
- Positives: is an inert material, can be used in combination with many other materials, can be shaped using simple carpentry tools.
- Negatives: has a reflective surface, has a static charge and attracts dust, is brittle, can craze over time, requires learning special techniques for fabrication and the adhesives needed expose the user to serious health risks.
- Polycarbonate can also be used to make mounts. However, concerns have been expressed by the conservation community about its potential to be hydroscopic (absorb water) and the associated risks to objects nearby.

Other Considerations

- Health and safety issues should always be considered before using new or unfamiliar materials and tools.
- Cost will affect the range of choices available, but it is still possible to use appropriate materials if limited by a small budget.
- Length of an exhibit will affect the quality of materials used. The longer the exhibit the higher the quality of materials required.

WEBSITES

MSDS Databases:

<http://www.msdssearch.com/dblinksn.htm>

<http://www.msdsonline.com/Home/>

Conservation Information Sites:

OzCons – Australian Conservation Discussion List

<http://www.charvolant.org/~ozcons/>

Canadian Conservation Institute

<http://www.cci-ic.gc.ca/>

Conservation OnLine, USA (CoOL)

<http://palimpsest.stanford.edu/>

New Zealand Professional Conservators Group

<http://www.conservators.org.nz/>

Southeastern Library Network, USA (Solinet)

<http://www.solinet.net/>

National Park Service, USA – Conserve O Grams

http://www.cr.nps.gov/museum/publications/consveogram/cons_toc.html

Northeast Document Conservation Center, USA

<http://www.nedcc.org/>

Heritage Preservation, USA

<http://www.heritagepreservation.org/>

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Canterbury Disaster Salvage Team

ANNUAL WORKSHOP

April 2003

EARLY NOTICE

Integrated Pest Management – A Practical Approach

By Vinod Daniel

(Head, Research Centre for Materials Conservation and the Built Environment
Australian Museum, Sydney, Australia)

This will be a one day workshop on how to use Integrated Pest Management in small museums and art galleries.

A full notice, including application details will be sent out early in 2003 when the workshop has been confirmed.
