CCI Newsletter

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Preserving my Heritage

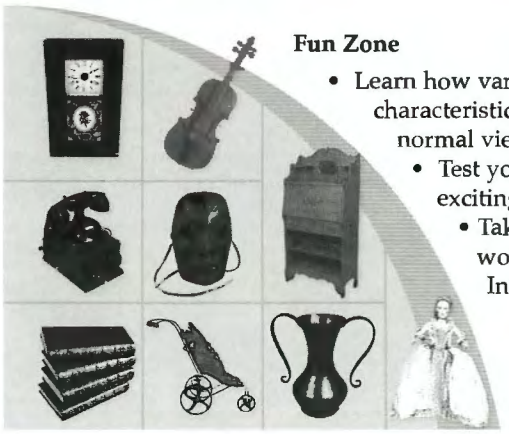
The Canadian Conservation Institute has launched a new Web site — "Preserving my Heritage" — aimed at helping you care for and preserve your family treasures, heirlooms, and works of art. The site also provides an introduction to the fascinating world of heritage conservation and the work carried out by the Canadian Conservation Institute.

How to Care for ...

Not only is your home your castle, it is also your own personal museum of family treasures. Books, paintings, china, christening gowns, sculptures, musical instruments, old tools, photographs, furniture, rugs — the list is nearly endless. The "How to Care for" section contains practical information on what you can do to preserve these items.

Amazing Facts

Fun and informative insights into the practice of conservation — from the clever use of unusual equipment and materials to technologies adapted from other scientific and technical areas.



Fun Zone

- Learn how various photographic methods reveal characteristics of objects that are not visible under normal viewing.
- Test your knowledge of preservation in an exciting online game.
- Take a virtual tour of the laboratories and workshops at the Canadian Conservation Institute.

And much, much more!

www.preservation.gc.ca

Cover: CCI's Alastair Fox (right) and visiting researcher Mena de Macedo Dinis (left) assist student Douwtje Van Der Meulen in assembling a test package during a workshop on packaging techniques that was part of the Preventive Conservation Summer School.

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Preventive Conservation: From Current Issues to Common Strategies

by Stefan Michalski, Special Projects Officer, Preventive Conservation Services

In June 2003, 22 conservation professionals involved in education and training came to Ottawa from across Canada and around the world to attend a pilot course on preventive conservation. The three-week course had been organized through a partnership between CCI and ICCROM (International Centre for the Study of the Preservation and Restoration of Cultural Property) — a partnership that broke new ground for both organizations. Now that it is over, comments from participants suggest that even more was achieved than initially hoped when planning began three years ago.

"A great opportunity for sharing resources, talents, gifts, and facilities."

"It was my pleasure to have been included in the terrific mix of participants. This experience has certainly enriched my life, and I am looking forward to bringing my 'new knowledge' into our classrooms."

"I came back with a lot of new inspiration."

"An excellent mix of useful discussions and sharing of opinions and experiences."

The final course product (described by Frederique Vincent in the accompanying article) was the result of a number of crucial decisions that arose years before — decisions that in hindsight were even more important than we realized.

Should CCI embark on an international project when its mandate is to serve Canadians? The preventive conservation summer school venture was more than just a CCI course that might include applicants from abroad. It was explicitly planned in partnership with ICCROM — an intergovernmental agency created under the auspices of UNESCO that had a mandate to provide or facilitate conservation training throughout the world.

"The Class of 2003": Summer School participants gather outside the CCI building in Ottawa for a class photo.

Over the years CCI has received numerous requests from training programs outside Canada for individual lecturers in preventive conservation, and was happy to comply whenever needs, benefits, and finances permitted. On these occasions it was always attempted, as much as possible, to "build local capacity" rather than just deliver lectures. As the Institute's international reputation developed, it became increasingly apparent (especially within the preventive conservation section) that it would be much more satisfying and cost-effective to bring the world's trainers to CCI's doorstep rather than respond to random requests. This desire to build capacity and transfer skills was also what ICCROM desired.

As partners, we agreed from the beginning to keep up to 10 spaces for Canadian participants and 15 spaces for international participants. This seemed a reasonable balance between serving CCI's national mandate and the international mandate of ICCROM.

A more subtle, unpredictable, but ultimately crucial reason for international participation was the opportunity to provide Canadian participants with a chance to "network" and "share." These words have become banal buzzwords, but as the course unfolded it was evident that given time and opportunity, constructive and warm professional linkages between Canadians and their international peers would be genuine. This became one of the hidden dividends of a long and well-planned course.

Why commit to a three-week course when CCI's usual offerings were three days? ICCROM is famous for its many professional courses that typically last four weeks or more. CCI, on the other hand, has spent years refining its training courses to meet the North American professional development model of two or three days, a standard in which one week is considered really long. At CCI, we were hesitant to attempt what seemed to us an impossible sell — three weeks! In the end, we acknowledged what ICCROM told us: if we wanted to offer a substantive course on

preventive conservation, at a level that merged the potential of our expert staff with the needs of experienced educators, then we would need weeks rather than days to get somewhere valuable.

In fact, it was difficult for the Canadian applicants in our target group to secure the necessary time and funding for a three-week course, but most succeeded. Knowing that low-cost university residence housing and food was crucial for everyone, it formed a key part of the early planning.

Why spend so much time and so many resources planning this course?
Both CCI and ICCROM spent more time and resources planning and developing this course than was normal for either organization.

Initiated in 2001, the course concept emerged from long-standing desires by each organization to offer substantive training in this area. By mid 2001, preliminary discussions between the project leaders established a shared concept that the course must not be a compressed "crash course," but instead be a cutting-edge presentation. It must not be "talking head" lectures; rather it should reach beyond the best current education methods.

In late 2001, three separate discussion groups led by staff from ICCROM and CCI spent three days at CCI exploring the many ways this concept could be structured in a real course design. The most promising ideas from the three groups were merged and contemplated.

In mid 2002, each organization went to its potential clients and asked what they actually needed from such a course. CCI invited a representative group of conservation professionals from across Canada for a one-day discussion including a "gap analysis" of the subject area. ICCROM approached a worldwide group through e-mail, using its extensive network of contacts. Both client groups were supportive, and both identified similar concerns in what they needed.

Shortly after, a core design team met and spent four days planning the course in detail: learning objectives, unit descriptions, and teaching methods, hour by hour. The fragments were "orchestrated" not only to follow a sequence of content but also to vary the learning method and maintain engagement. Advice from the education consultants from each organization was as crucial to the mix as the advice from the needs assessments. The title "From Current Issues to Common Strategies" was coined on the last day by the ICCROM project leader Catherine Antomarchi. It neatly captured the ambitious plans for the course.

So was all this time and effort worth it? Although parts of the course were taught in familiar ways, at least half of it was taught very differently. This approach not only worked very well, but it also taught both participants and presenters how to teach better. We asked in great detail what "they" needed and then delivered it — and the gratitude showed. In response to criticism of previous ICCROM and CCI courses, we included ample time to discuss, to think, to read, to talk to other CCI staff, to visit, and to practise. And it worked.

Could we borrow resources from other institutions with expertise?
We were able to leverage our partnership into a suite of worldwide collaborations — CCI is not the sole source of the best experts! Course teachers came from the Canadian Museum of Nature, the Library and Archives Canada, the Centre de conservation du Québec, the Instituut Collectie Nederland (Netherlands Institute of Cultural Heritage), and the Getty Conservation Institute. Panel speakers included experts from the Woodland Cultural Centre Museum (Brantford, Ontario), the University of British Columbia Museum of Anthropology, and the National Museum of the American Indian, Smithsonian Institution.

Our own community also provided essential "behind the scenes" practicums. Staff from the City of Ottawa guided participants through various local historic house museums, and staff from Petroglyphs Provincial Park northeast of Peterborough, Ontario, provided a special evening of contemplation on-site. Participants commented especially on the value of these local experiences.

What is the future of the course?
This first presentation of the course has addressed almost all of CCI's primary target group of trainers of preventive conservation in Canada, so our obligations to this group will now revert to research, advice, and supporting publications. For CCI, a second offering will make sense only if the course content is adjusted to meet the needs of an expanded target group such as museology programs, cultural resource management programs, or even public administration programs. Indeed, this would reflect the growing recognition that many professional and administrative personnel outside the traditional conservation boundaries play a crucial role in preventive conservation. The situation is somewhat different for ICCROM: they also recognize the need for an expanded circle of recipients, but currently have a substantial waiting list of applicants for the same course, proposals from other agencies offering other venues, and a desire to see further returns on the extensive planning investment. Given these considerations, the precise reincarnations of the course remain to be seen.

Whatever happens in the future, CCI and ICCROM have already achieved their initial goal of transferring to others the capacity to teach the care of their communities' heritage. And both institutes look forward to continuing their fruitful collaboration.

Summer School: A Human and Professional Experience

by Frederique Vincent, Professor, Institut Supérieur d'Ingénierie et de Gestion de l'Environnement, École des Mines de Paris

When ICCROM suggested that I take part in this course as a moderator, I did not hesitate.

CCI, a legendary institution since my university days, whose name evokes knowledge, research, innovation, the desire to share knowledge acquired through publications and conferences... and ICCROM, with whom I work regularly, and whose mission seems to be essential in the global context because it aspires, through conservation, to make cultural heritage benefit humanity. It also contributes to preserving heritage in the world today and for the future through training, information, research, cooperation and advocacy...

The alliance between these two institutions could only be exciting!

This course at CCI brought together 22 conservation professionals from 12 countries who are involved in training and have varied skills and experience, in order to offer them access to the most recent research in the field and to fully maximize the dissemination of knowledge, methodologies, and practices through a large and effective teaching team.

This challenge was successfully met. First, because the participants were united by strong motivation, the desire to improve the situation in their countries or institutions, and the desire to better inform others and share their knowledge. Second, because the entire CCI team, including administrative staff, researchers, and librarians, gave us a warm welcome and was always available to listen, help, and give as much information as possible to participants. And finally, because the entire teaching team, i.e. CCI experts and partner institutions, shared their knowledge freely and listened to requests and questions. These factors combined to create a true synergy around the theme of preventive conservation.

Over the three weeks, a broad range of themes was addressed and new subjects were explored, including decision-making techniques, risk management, and non-chemical pest control. Varied and dynamic learning techniques were used. On any given day, only one or two lectures of about one hour were given, allowing learning time not only for numerous professional discussions during group reflection exercises, site visits, and practical exercises, but also free time for individual exercises and access to the bookstore, workshops, and various professionals in order to derive the greatest benefit from this opportunity at CCI.

This course afforded all participants and stakeholders a new perspective on their work, a different vision of preventive conservation, and new approaches to teaching it. It helped create a true network of professionals, as reflected by the many e-mails exchanged between all the players. It also gave rise to international cooperation such as the metal conservation initiative between Austrian, Canadian, and Dutch participants and the mobile laboratory project for South American countries, and to new planned courses, including the national course in India in January 2004, and new programs created by the various participants.

Finally, since CCI celebrated 30 years of excellence in heritage preservation in 2002, what could have been more fitting in 2003 than training professionals from around the world?

Thanks to ICCROM and CCI for making this possible.

Paul Marcon of CCI introduces Frederique Vincent (centre) and Catherine Antomarchi (right) to demonstration materials and teaching methods that have been used in past seminars and workshops on the packing and transport of works of art.

The 22 Summer School participants and their institutional affiliations:

- Patrick Albert
  Centre de conservation du Québec, Canada
- Denise Allard
  Centre de conservation du Québec, Canada
- Bart Ankersmit
  Netherlands Institute of Cultural Heritage, The Netherlands
- Martijn De Ruijter
  Tropenmuseum & Reinwardt Academy, The Netherlands
- Ziva Domingo
  Instituto Nacional do Patrimonio Cultural-UNESCO, Angola
- Bent Eshoj
  Royal Danish Academy of Fine Arts, School of Conservation, Denmark
- Fiona Graham
  Canadian Museum of Nature, Canada
- Martina Griesser-Stermscheg,
  University of Applied Arts, Austria
- Kamal K. Jain
  National Research Laboratory for Conservation of Cultural Property, India
- Rosanna Kuon
  Museo de Arte de Lima/Universidad Ricardo Palma, Peru
- Gayle McIntyre
  Sir Sandford Fleming College, Canada
- Emanuela Sara Leite Fragoso
  Universidade Nova de Lisboa, Portugal
- Catherine Mathias
  Memorial University of Newfoundland, Canada
- Iona McCraith
  Archives Association of Ontario and Sir Sandford Fleming College, Canada
- Mallika Mitra
  Intach Indian Conservation Institute, India
- Alison Murray
  Art Conservation Program, Queen's University, Canada
- Katalin Orosz
  National Archives of Hungary, Hungary
- Anny Ostau de la Font Jordi
  Externado de Colombia University, Faculty of Restoration of Cultural Heritage, Colombia
- Krysia Spirodowicz
  Art Conservation Program, Queen's University, Canada
- Susanne Sutherland
  Parks Canada, Canada
- Douwtje Van Der Meulen
  Department of Conservation, University of Oslo, Norway
- Vesna Zivkovic
  DIANA Centre for Conservation, Serbia and Montenegro

Mould Growth in Heritage Collections

by Sherry Guild, Conservator, Treatment and Development Division - Works on Paper

Mould infestation in heritage collections can damage artifacts and may pose a health risk to individuals who work with these collections. Coping with a mould infestation in a heritage collection is a daunting task, one that is likely to raise many questions:

- Why did the mould grow?
- How can the problem be corrected?
- What is the health risk?
- Should the mould be identified?
- Can the mould be removed from the artifacts? If so, how?

Over the years, CCI staff have responded to numerous requests for assistance from clients with mould problems. These "calls for help" have been for a few mouldy artifacts or in some cases for an entire collection infested with mould. As a result of this and in response to a need identified by the conservation community, a new Technical Bulletin (*Mould Prevention and Collection Recovery: Guidelines for Heritage Collections*, Technical Bulletin No. 26) was recently written by Sherry Guild and Maureen MacDonald.

Preventing mould growth in heritage collections is of fundamental importance, and the first half of the publication focuses on this aspect of collection care. Steps to prevent mould infestation should focus mainly on measures that keep the level of moisture in the air and the moisture content of the artifact below the level required for mould growth. Critical factors to control in order to prevent mould growth (i.e. indoor spores, nutrient sources, moisture, air circulation, and temperature) are discussed. Also included are a table describing potential sources of bioaerosol contamination in buildings and a preventive measures checklist. Both can be used as a guide to spot potential problems in a

Conservator using a cleaning screen and low vacuum suction to clean fragile paper.

building and collection that might lead to mould growth.

Mould is ubiquitous and normal background concentrations do not usually affect healthy individuals. In contaminated environments, however, the risk of health effects from exposure to mould increases. Every effort should be made to limit human exposure to it. Reactions are varied and depend on the nature of the mould species, the products being produced, the amount and duration of exposure, and the susceptibility of the individual. Mould spores do not have to be viable to retain allergenic or toxigenic properties. Exposure to dormant mould is as much a health risk as exposure to viable mould.

Conscientiously removing visible mould growth and reducing the total number of spores from infested artifacts is necessary. If precautions are taken, small (<0.3 m^2 total surface area contaminated by visible mould growth), medium-sized (0.3–3 m^2), and large (3–10 m^2) outbreaks of mould in a collection can safely be cleaned by following the guidelines and recommendations in the Technical Bulletin. Be sure to use the appropriate personal protective equipment (respiratory protection, goggles, gloves, protective clothing) as indicated for the various levels of contamination. For extensive (>10 m^2) mould contamination in the collection, it is advisable to seek professional help.

Close vacuuming is one of the most effective ways to remove mould growth and reduce the total number of mould spores on the artifact. Be systematic and thorough when removing the mould and carefully vacuum the artifact all over, not just where mould growth can be seen. Mould growth invisible to the naked eye may be present on unsuspected areas.

To avoid dispersing mould spores into the environment, a vacuum cleaner fitted with a HEPA (high efficiency particulate air) filter is required. Vacuum cleaners with a variable speed control, used to modify vacuum suction, are recommended.

Other tools and equipment for removing mould, along with various supplies and cleaning and disinfecting solutions, are also described in the Technical Bulletin. Of interest to larger institutions may be a class 1 biological safety enclosure (a ventilated enclosure for personal protection in which the inward airflow is directed away from the operator). This type of enclosure meets health and safety guidelines for working with mould. During operation, the room air is drawn into the front of the enclosure, preventing aerosols from escaping into the room. Before leaving the enclosure, air is forced through an exhaust HEPA filter so that particulate-free air recirculates into the room.

There are no guidelines or regulations for handling artifacts after removing mould, but it may be appropriate to adopt a cautious approach when handling and using these artifacts. We recommend that an artifact be identified in a manner that allows users to take precautions before touching it. This should include wearing disposable gloves when handling the artifact and washing hands with soap and water afterwards.

Conservator working at a class 1 biological safety enclosure. Note that the vacuum cleaner nozzle is secured inside the hood. This helps ensure the nozzle does not accidentally touch the artifact and that the contaminated nozzle remains in the enclosure.

Original Stencilled Ceiling of the Federal Building in Winnipeg Revealed

by Nancy E. Binnie, Conservation Scientist (Chemist), Conservation Processes and Materials Research

The Federal (Dominion Public) Building at 269 Main Street, Winnipeg, Manitoba, was built in 1937 in a modern Gothic style. Over the years, repairs to damaged plaster and changes in paint colour have altered the decorative elements of the Main Lobby ceiling. Much of the historical character of the Main Lobby, however, can be seen in its preserved, original design elements including the decorative terrazzo floors, stone light brackets, brass elevator doors, bronze torch lamps, and walls of hone-finished Manitoba limestone.

In March 2003, Alastair Fox and I were invited by Public Works and Government Services Canada (PWGSC) to document the original paint scheme on the panelled ceiling of the Main Lobby. This investigative work was suggested by the conservation architect who contributed to Federal Heritage Branch Review Office (FHBRO) documents for the building. Work plans included removing modern and historic paint layers to determine the original paint colours on ceiling panels, beams, and frieze. Paint layers were also sampled to determine if they contained lead (which could be a concern during remediation work), to identify pigments and media, and to confirm paint application sequences seen visually. Information on the original finishes was limited to a previous analysis of several ceiling paint chips, original architectural drawings, and a newspaper article published when the building opened.

The Federal (Dominion Public) Building, Winnipeg, was built in 1937 in a modern Gothic style and is sited on an angular-shaped lot.

Black overpaint from the ceiling panels was removed by sanding to reveal a geometric pattern with central squares, radiating bars, chevrons, triangles, and a checkered border. The sanding revealed opaque layers of red, blue, cream, and silver paint, with two colour schemes used on alternating panels. Paint colours were measured using a Minolta CM-2022 portable spectrophotometer for documentation purposes. For visual reference, they were matched to paint chips from various manufacturers, as well as to reference chips from the *Munsell Book of Colour*. The stencil pattern was traced and a 1:1 scale drawing was made to use later in re-creating the original pattern. Pigments found through later analysis by Kate Helwig and Elizabeth Moffatt at CCI included red iron oxide, ultramarine blue, barium sulphate/calcium sulphate/lead white, aluminum flake, and bronze powder.

Original stencil pattern revealed below one of the 42 panelled areas on the ceiling of the Main Lobby. The target nozzle of the portable spectrophotometer is shown at a location where colour will be measured.

Paint layers were also examined on three different types of bronze-coloured beams, some of which were embellished with simple, decorative flower elements or covered by a sponge-textured stucco layer. All beams were originally coated with a cream-coloured, lead-based paint, after which the main (largest) beams were painted with the original layer of bronze paint. A stucco

layer was applied to secondary (smaller) beams and decorative flower elements. Over the stucco layer, the more modern, present-day bronze-coloured paint was applied. This same bronze colour also forms the present-day paint layer on the main beams. There are no records (photos or written) to tell us when the stucco was applied; therefore, it seems possible that for some time the secondary ceiling beams were a cream colour rather than the bronze we see today.

As soon as issues related to plaster stability are addressed, PWGSC plans to restore the original ceiling stencil pattern and beams as part of their long-term plans to restore the historic elements of this building.

Sketch of the stencil pattern on one of the panel surfaces (59 x 169 cm) with the four colours (silver, blue, red, and cream) indicated as white, black, light grey, and dark grey.

More information on CCI and its activities can be found on CCI's World Wide Web pages:

http://www.cci-icc.gc.ca

Preservation of Pianos

by Robert L. Barclay, Senior Conservator, Treatment and Development Division - Objects

The piano has played a large part in the development of Canada's identity. We have only to think of Glenn Gould and his profound influence on world pianistic style to realize the place of this instrument in our culture. For a country with a relatively small and diffuse population, we have contributed excellent pianists out of all proportion to our numbers. The names of Angela Hewitt, Louis Lortie, Marc-André Hamelin, Jon Kimura Parker, and many others immediately come to mind. This pianistic culture did not spring out of thin air. The piano has been a feature of our concert halls, schools, churches, seminaries, recreation centres, and living rooms for four centuries. Both public and private collections attest to this. Not only did Canadian manufacturers satisfy their own local market, but they also became major world producers of pianos and other instruments, some of which are still found in various countries around the world.

Very few local museums are without at least one piano, many of which could tell the most wonderful stories if we only had the art to extract them. When one encounters an early 19th century piano, perhaps one from a famed maker in London or Paris, its presence always triggers a chain of questions. How did this instrument arrive here, who ordered it and waited for the wagon to deliver it from the train or the ship, how did they feel when they played the first notes? And when you find an early Canadian piano, perhaps one made in a small Ontario or Quebec town before the First World War, it is beguiling to imagine the entire social and technical ambience surrounding the workshop where the instrument first came to life. Often, written in pencil underneath the lowest key, there will be the signature of the craftsman who finished the instrument and the date of its

Photo courtesy of Cantos Music Foundation.

A rare upright piano made in 1862 by Brockly & Brockly of Halifax, Nova Scotia. This piano is currently in the Cantos instrument collection in Calgary, Alberta.

Photo courtesy of Library and Archives Canada.

Glenn Gould's Steinway piano, now preserved in the Library and Archives Canada in Ottawa.

completion. This is a touchstone to a life and a culture that are gone forever.

As a nation we have an excellent record for conserving the artifacts of our cultural heritage. Early and valuable pianos are no exception. The Cantos Music Foundation in Calgary boasts one of the finest collections of keyboard instruments anywhere. The collection includes, among definitive examples from many countries, a rare upright piano by Brockly & Brockly of Halifax, Nova Scotia, made in 1862. Altogether, the collection contains some 300 instruments (many of which are unique) that are all preserved in carefully controlled conditions.

Nowhere else in the world is there such a focussed and extensive collection, and we can be justifiably proud of it. Many other Canadian museums also preserve excellent examples of both locally made instruments and products imported from Europe.

When it comes to more recent pianos, especially those still in private hands, the situation is not so optimistic. Instruments that are treated as utensils sometimes fail to accrue the value that items preserved in collections acquire. Initially, there are good practical reasons to preserve a used piano and have it restored. Because the average life of an old piano is more than 50 years, and with proper treatment at least 50 more, it is a waste of our resources to buy new pianos when old ones can be so effectively "recycled." As well, some older pianos have a very high mechanical quality, exquisite veneers, and attention to detail in cabinetry and decoration that are unavailable on new, reasonably priced pianos. As professional restorer Marc Thompson, of Pianoforte (1999) Inc. in Montreal, has said: "Not enough people value their old pianos, and quite often a truly historic instrument is sent to the dump because an ordinary piano tuner has said it is not worth putting into playing condition." Many historic pianos have ended their lives on the say-so of unqualified practitioners. Owners of old pianos should not consider them simply as musical tools, to be discarded when their intended function may have passed, but as items of intrinsic and sometimes real historic value. This is not to say that they cannot continue to function, but that assessments of their working status and their value as cultural documents are the realm of specialists.

Increasingly, as we focus on our cultural heritage and look to the past for enduring values, we learn to treasure those things we possess from past times. As the industries that service these objects have grown, so too have sensitivities among their practitioners to the potential historic qualities of the objects they tend. Today there exists a fairly wide network of specialists in early pianos who are able to provide sound advice on musical potential and cultural and monetary value.

CCI can be contacted for further information on the care and preservation of historic pianos. Although advice on monetary value is outside our mandate, we can provide references to organizations and individuals who provide the full range of services that historic pianos need.

Coming Soon!

Airborne Pollutants in Museums, Galleries, and Archives: Risk Assessment, Control Strategies, and Preservation Management

by Jean Tétreault

This book defines the key airborne pollutants for indoor museum environments, and provides some basic tools to assess the risk to collections exposed to these pollutants. It also establishes guidelines for control strategies that give flexible, pragmatic solutions and provides a simple tool for cost–benefit analyses that can fulfil the principles and policies of individual museums. Visit the online Bookstore for news of this release! **www.cci-icc.gc.ca**

Discovering the Paintings of Jean-Paul Riopelle

by Marie-Claude Corbeil, Senior Conservation Scientist, Analytical Research Laboratory

The Opéra Bastille in Paris, place de la Bastille.

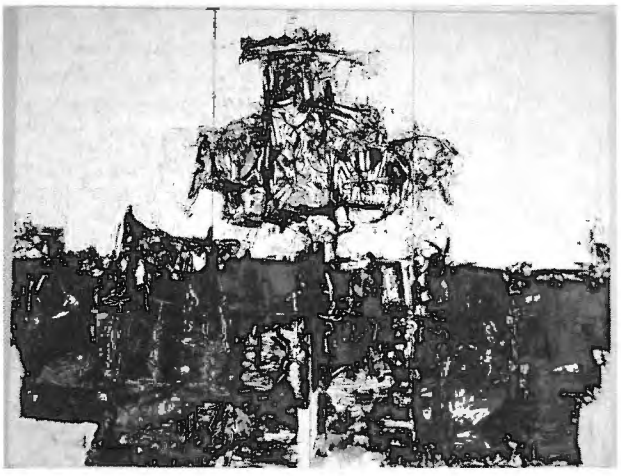
Jean-Paul Riopelle is one of Canada's most important artists and one of the few whose works are featured in public and private collections around the world. Initially, Riopelle used oil paints applied generously with a palette knife, working equally well in both colour and black and white to create spectacular compositions. In the 1980s, he experimented with non-traditional materials such as aerosol paint and fabric paint, creating works that are both simple and complex, airy and dense.

In January 2002, CCI began a project to study Riopelle's technique as part of its research program on the materials and techniques of 20th-century Canadian artists.[1] Although such a project was long overdue in view of Riopelle's national and international stature, the task seemed virtually insurmountable given the artist's prolific production. The interest shown by Yseult Riopelle, the painter's daughter and author of the *catalogue raisonné* of his work, nevertheless encouraged us to take on the challenge.

Unfortunately, a shadow was cast over the beginning of the project by Riopelle's death on March 12, 2002. In the many tributes paid to him, it was noted that Riopelle would survive because of his work, making it, in turn, essential that his work survive. This, of course, made our study all the more important, because it sought to gain a better understanding of Riopelle's materials and technique in order to take the necessary measures to prevent or address conservation problems.

To attempt to identify and understand the physical characteristics of his works, three avenues would be explored: searching the archives and related documents to find information about the materials Riopelle used; examining the real or imminent problems in conserving the artist's paintings; and analysing the materials used in a representative selection of paintings from various periods.

The project began with three and a half months in Paris where I conducted documentary research and examined a number of works in French collections. Although Riopelle started out in Canada, it was in France that he became successful and was active for a large part of his career as an artist. There are, thus, works in France dating from periods in his career that are not well represented in Canadian collections. It was important to examine these works, as Yseult Riopelle stressed.



Point de rencontre *(428 cm x 548 cm, 1963), after treatment.*

My stay in France was made possible as a result of the Canada-France Agreement on Museums. I was welcomed by the Centre de recherche et de restauration des musées de France (C2RMF) and received support and assistance from many staff members, both scientists and curators, who provided access to their records and facilitated my work with French institutions. During my stay, I also had the opportunity to examine three very large paintings in the collection of the Musée national d'art moderne as well as *Point de rencontre*, a painting on display at the Opéra Bastille. This painting, a 1989 gift from Canada to France on the occasion of the bicentenary of the French Revolution, had been treated by CCI and National Gallery of Canada staff before being transported to France.

In Canada, the research project was supported right from the development stage by Ms. Riopelle, who became a key partner. The Montreal Museum of Fine Arts, the Musée d'art contemporain de Montréal, and the Musée national des beaux-arts du Québec generously opened the doors of their storage and exhibition areas for us. Kate Helwig, who is also involved in the project, and I greatly appreciated the assistance provided by the curators and conservators from these three galleries, who always show great interest in CCI projects on the materials and techniques of Canadian artists.

Samples were taken from 38 works, including those in French collections, executed between 1944 and 1992. The project is expected to take four years. The analysis is progressing well and a database has been created to record the information about the works and the analytical results.

1. To learn more about this program, see the article by John M. Taylor in *CCI Newsletter*, No. 10 (September 1992), p. 9.

Editor's Note

These three regular features appear in each issue of the *Newsletter*. "The History of Conservation" looks at conservation treatments of the past, "The Science of Conservation" examines recent scientific analyses that have been conducted at CCI, and "On Display" highlights recent conservation treatments. Watch for them in future issues!

History of Conservation

Alexander Scott

by Robert L. Barclay, Senior Conservator, Treatment and Development Division - Objects

The characterization and treatment of deteriorated artifacts stored underground during the First World War provided the museum preservation discipline with a strong stimulus towards scientific investigation.[1] In particular, the work conducted for The British Museum in the 1920s by Alexander Scott of the Department of Scientific and Industrial Research paved the way for the modern era. The introduction to his third report of 1926 shows a forward-looking intention. He encourages collectors: "To feel that many valuable objects that seem irreparable on account of the condition into which they have fallen, are still worth endeavouring to preserve. Even if these endeavours should only be partially successful from the point of view of restoration, in almost every case details of manufacture will be revealed and light thrown upon the causes and mechanisms of decay, and these facts alone may prove worthy of being recorded, if for no other reason than to warn others in charge of similar specimens and faced with like problems."[2]

Although Scott does not use the word conservation to describe his activities, it is clear that the aim of creating a pleasing appearance through restoration is now augmented by the scientist's ability to derive information about the object. Seen in the above quotation is the rising maturity of the application of the scientific method to preserving museum objects. This is conservation in the making.

1. Oddy, A., ed. *The Art of the Conservator.* Washington, DC: Smithsonian Institution Press, 1992, pp. 13–14.

2. Scott, A. *The Cleaning and Restoration of Museum Exhibits – third report.* London, UK: His Majesty's Stationery Office, 1926, p. 2.

Science of Conservation

Cyclohexylamine: An Unwanted Museum Visitor

by Marie-Claude Corbeil, Senior Conservation Scientist, and Kate Helwig, Conservation Scientist, Analytical Research Laboratory

Conservators at Glenbow Museum in Calgary, Alberta, recently noticed that crystals were forming on artifacts both on display and in storage, and as different as the leather case of a tape recorder, a sandstone sculpture, a contemporary painting, a wooden barrel, a wooden crate and a stoneware jug. Even after brushing the crystals off the artifacts, they would soon reappear on objects.

To determine the nature and source of these mysterious crystals, small samples were removed from the artifacts and sent to CCI for analysis. Microdiffractometry showed that the crystals were composed of cyclohexylammonium chloride, $C_6H_{13}N{\cdot}AHCl$.

Photo courtesy of Glenbow Museum.

Box containing (empty) acid bottle, showing crystal growth.

Our research showed that cyclohexylamine, a vapour phase inhibitor (VPI) often used in steam generation and distribution systems required for heating or humidification to protect

the ferrous components of these systems from corrosion,[1,2] could be the culprit. It, along with other VPIs such as morpholine and diethylaminoethanol, was determined to be used in the museum's steam humidification system.

The artifacts on which the cyclohexylamine crystallized must have been acidic, as is no doubt the case for the artifact shown here. As for the source of chlorides, required for the salt to form, it may have been from the artifacts themselves or external pollutants. Cyclohexylamine is a stronger base than morpholine (and probably also stronger than diethylaminoethanol), which means that of the three VPIs, cyclohexylamine will react first with any acid. This explains why only the cyclohexylamine salt formed on the objects.

Although VPIs help prevent corrosion of metals, this example shows that they can react with other types of material in an unexpected and undesirable way. Glenbow Museum staff are taking measures to address the problem now that the source is known.

1. Malaiyandi, M., G.H. Thomas, and M.E. Meek. "Sampling and Analysis of Some Corrosion Inhibiting Amines in Steam Condensates." *Journal of Environmental Science and Health, Part A, Environmental Science and Engineering* 14, 7 (1979): pp. 609–627.

2. Malaiyandi, M., and M.J. Goddard. "Development of Analytical Methodology and a Report on Collaborative Study on the Determination of Morpholine, Cyclohexylamine, and Diethylaminoethanol in Aqueous Samples by Direct Aqueous Injection Gas Chromatography." *Journal of Testing and Evaluation* 18, 2 (1990): pp. 87–97.

On Display

The Southampton Swivel Gun

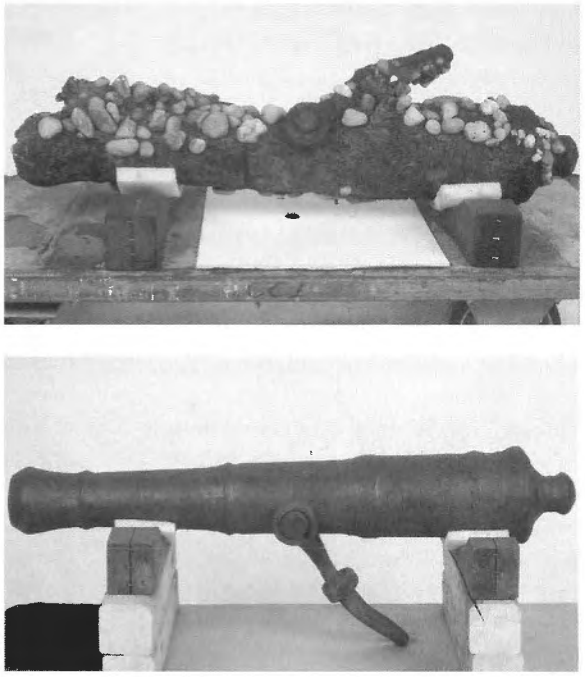
by Tara Grant and Charlotte Newton, Senior Conservators, Conservation Processes and Materials Research

In October 2002, a small swivel gun was found during excavation of a ship buried on the beach at Southampton, Ontario, on Lake Huron. It was excavated by a team headed by archaeologist Ken Cassavoy, under a permit issued by the Ontario Ministry of Citizenship and Culture. Historical research, conducted by the archaeologist and marine historians from the area, has led to a tentative identification of the ship as the *Weasel*, built in Detroit [in present-day Michigan] in 1786, and apparently lost at Southampton in 1798. If identification can be confirmed, this would be the earliest known shipwreck site in the Upper Great Lakes.

The 1.03-m-long cast iron swivel gun, weighing about 90 kg, was covered with a thick encrustation of smooth pebbles, sand, iron corrosion, and iron spikes and nails. The soft, black, porous corrosion was identified as siderite ($FeCO_3$). Siderite is a stable, non-conducting iron corrosion product formed when iron is buried in a low-oxygen, highly carbonated soil found in limestone areas or shell middens. The cast iron barrel appeared to be in good condition with a significant amount of iron remaining. The wrought iron swivel mount was heavily corroded and unable to move. The bore was blocked with a pebble-based concretion. X-radiography could not determine the cannon's condition or if it was still loaded.

One of the major problems for iron artifacts is contamination with chlorides during burial. Because the salt promotes corrosion, extensive chemical or electrochemical treatment is required to remove the chlorides and stabilize the iron. However, tests of the storage water and corrosion analysis of this gun found no detectable levels of chloride. Treatment was, therefore, a straightforward mechanical removal of the concretion layers using hammers, chisels, and dental tools and brushes. Cleaning the bore revealed that the cannon did not contain a charge. The cleaning produced an even, hard surface with many details still visible including the touch hole and an inscription. Because the cannon was going into a museum environment and the surface was stable, no surface coating was applied.

The swivel gun is currently on display at the Bruce County Museum, Southampton, Ontario.



The Southampton swivel gun before (top) and after treatment (bottom).

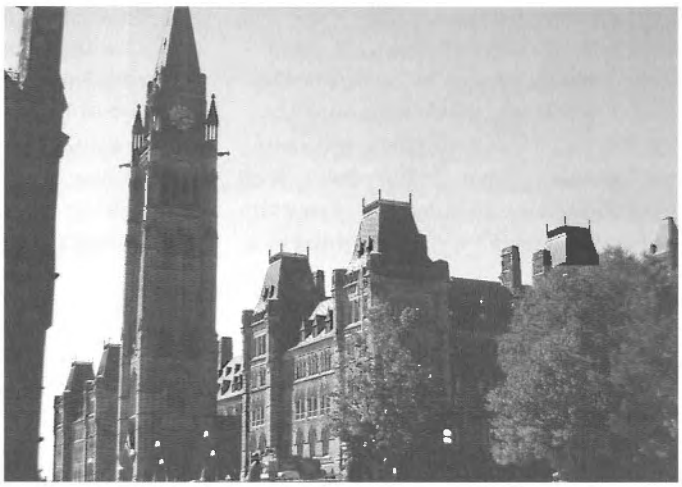
"Remember, This is Not a Museum": CCI and the Rehabilitation of the Parliamentary Precinct

by James Bourdeau, Senior Collections Preservation Advisor,
Treatment and Development Division - Fine Arts and Architectural Services

Canada's Parliamentary Precinct, situated in Ottawa on a bluff overlooking the Ottawa River, is composed of three major neo-Gothic buildings that were constructed and reconstructed in several phases from 1859 through to the 1960s. It is a unique creation: one of the finest collections of neo-Gothic buildings in the world on a site that has been designated as one of only three heritage cultural landscapes in Canada. Although renowned for its unique heritage character reflecting the 19th century Picturesque tradition, in reality the Precinct is a collection of very crowded office buildings where the practical business of governing Canada occurs. Its primary purpose, i.e. to run a modern federal parliament efficiently, exerts significant demands on the ageing heritage fabric and on the site. Parliament is indeed not a museum, but its importance as a symbol of Canada is unparalleled and is acknowledged by all Canadians.

The care of Canada's Parliamentary Precinct is a responsibility shared by four partners: the Senate, the House of Commons, the Library of Parliament, and the Department of Public Works and Government Services Canada - Parliamentary Precinct Directorate (PWGSC-PPD). Over the years these partners have worked independently to develop systems for the care and preservation of heritage collections and building elements on Parliament Hill — a reflection of the constitutional requirement to maintain the separation of the Houses of Parliament.

The Canadian Conservation Institute (Department of Canadian Heritage) and PWGSC have recently entered into a Memorandum of Understanding designed to provide conservation services for this important and unique heritage site. As a result of this agreement, a conservation strategic planning position — a full-time Senior Collections Preservation Advisor (SCPA) — has been funded by PWGSC and staffed by CCI for a seven-year period. The position has much scope, little real authority, and a great degree of influence. The SCPA reports to the Building Components Steering Committee (BCSC) under the Building Components and Connectivity (BCC) program. This program co-ordinates elements of the $1.8 billion Long Term Vision and Plan (LTVP) for the rehabilitation and renewal of Canada's Parliamentary Precinct, its buildings, and infrastructure. The SCPA is a key advisor to this committee.



The south façade of the Centre Block and the Peace Tower are an important symbol to all Canadians.

CCI has taken a dual approach to tackling the need for conservation assistance on the Hill. First, the creation of a full-time conservation advisory position under the BCC makes it possible to integrate conservation planning into BCC architectural and engineering projects and long-term strategic planning. Second, by having a conservator on the Hill, it becomes easier to identify the operational requirements for day-to-day preventive conservation and treatment services for moveable and fixed heritage collections. The SCPA chairs a standing working group of representatives from the four parliamentary partners. The mandate of this working group is to develop and recommend heritage collections policy and modern collections management systems for the Precinct to the BCSC. One of the first accomplishments of this group was the development of extensive guidelines for introducing art and architectural design elements into the new parliamentary building.

The framework for all of this activity is the development of the Building Components Program, the "BC" in the "BCC." The BCSC has requested that the SCPA assist in the development of the initial phase of the Building Components Program through to 2008. This is a daunting task that involves the strategic planning of projects and resources necessary to implement the LTVP as it applies to all heritage building elements and collections in the Precinct. Identifying resources includes not only costs, material and space requirements, and infrastructure, but also professional issues such as the availability

of conservation professionals and heritage craft specialists to respond to the increasing demands for professional conservation project work on the Hill as the LTVP is implemented.

Although the project is still at a preliminary stage, the impact on conservation will likely be significant. The Library of Parliament is already under renovation, and several pilot projects and investigations are running in the Centre Block. Considering that as many as 80 special heritage rooms are involved in the project, the tasks of developing swing space for displaced collections, dealing with issues of site protection and supervision, and advising engineering and architectural design teams are likely to cause many sleepless nights. By 2024, these historic buildings (that are not a museum) will benefit from the introduction of modern services, building systems, and communications cabling. The heritage building components and moveable collections will be preserved, conserved, and reinstated where possible for the next generation of Parliamentarians and for all Canadians.

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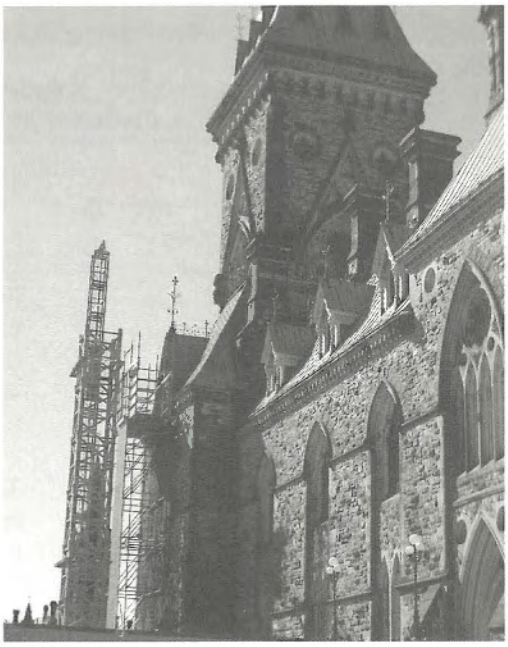


The East Block retains most of its original character from the 1860s. Interior upgrades and stabilization of the 140-year-old building masonry are urgent requirements.

Long Term Vision and Plan for the Parliamentary Precinct

The Long Term Vision and Plan (LTVP) was adopted in 2001. What drives the LTVP is the need to renew the precinct and provide accommodations for parliamentarians into the next century. It has a twenty-three year horizon in which the services, infrastructure and heritage fabric of the Parliament Buildings will be rehabilitated and conserved, and a new parliamentary building and several major building additions will be constructed to add badly-needed committee room and office space for parliamentarians within five concurrent phases. One major project will be the relocation of the House of Commons and the Senate into swing space to permit the closing of the Centre Block and its complete renovation. Heritage collections and building components will require relocating off site and immovable elements will require site protection during the works. Refitting to protect delicate Tyndall limestone and marble finishes will be necessary throughout the building.

The phases of the LTVP can be summarized as follows:

PHASE 1 2001 - 2008/9
(core construction/renovation projects)
Library of Parliament
East Block, 1867 Wing Masonry
Wellington Building
Victoria Building
Bank Street Building
(New Parliamentary Building Construction)

PHASE 2 2008/9 - 2011/12
(renovation of the Centre Block)
Confederation Building Masonry
West Block
Confederation/Justice Infill
East Block Infill

PHASE 3 2011/12 - 2016/17
(renovation of the Centre Block)
Centre Block, One Phase

PHASE 4 2016/17 - 2020/21
(completion of renovations of existing buildings)
East Block, 1867 Wing
Confederation Building

PHASE 5 2020/21 - 2023/24
(completion of new accommodations)
Centre Block Underground Services (CBUS) South

Source: http://www.parliamenthill.gc.ca/text/ltvp-index-e.html

Symposium 2003 — A Resounding Success!

by Jane L. Down, Senior Conservation Scientist,
and Joe Iraci, Conservation Scientist, Conservation Processes and Materials Research Division

Symposium 2003 - Preservation of Electronic Records: New Knowledge and Decision-making took place in Ottawa on September 15–18, 2003. Co-hosted by the Canadian Conservation Institute (CCI), the Library and Archives Canada (LAC), and the Canadian Heritage Information Network (CHIN), the organization of this symposium was a true partnership. Each of the co-hosts pulled their weight and contributed their unique expertise. The synergistic effect of this relationship along with an exciting program and a number of special events resulted in a highly successful and enjoyable experience for everyone — organizers and participants alike.

This was the largest symposium in which CCI has ever been involved, with more than 350 registered delegates. Of these, 85% were from Canada, 10% from the United States, and the rest from a variety of countries including Australia, Bermuda, the Cayman Islands, Cuba, France, Italy, Malaysia, Mexico, the Netherlands, New Zealand, Taiwan, and the United Kingdom.

Program

The program for Symposium 2003 offered delegates something a little different from the norm. Rather than presenting a series of generally unrelated topics, the sessions focused on areas that related to each other in a structured manner. In this way, all the key issues relating to the preservation of electronic records could be introduced in a logical sequence from the opening to closing speakers. The topics discussed included not only storage media, but also the issues that must be addressed before considering how long an electronic record will last. [Note: For the purpose of this symposium, the term 'electronic record' was used to describe a large variety of records, e.g. audio and video recordings in analog or digital form and data files such as text, spreadsheets, e-mails, etc.]

An exhibit arranged for Symposium 2003 of examples of material held in the Music Division, Library and Archives Canada, including manuscripts, printed material and sound recordings.

The program took the form of a decision tree that was initially formulated by the program committee, but refined by Tom Strang from CCI and Bruce Walton from LAC. Addressing the key decisions/choices that an institution needs to make when considering the acquisition and preservation of electronic records led to five main session categories: Appraisal of Electronic Records; Authenticity of Electronic Records; Developing a Preservation Strategy for Electronic Records; Preservation Strategies for Electronic Records; and Media Knowledge. The call for papers clearly outlined this approach, and resulted in the submission of more than 45 abstracts. Because of the decision tree program structure, the process to select the papers was very specific. The final program consisted of 29 papers from 6 countries: Canada (14); United States (8); Australia (3); United Kingdom (2); France (1); and Germany (1). In addition to the main program, 4 posters that fit into the program structure were also presented (1 from Canada, 2 from the United States, and 1 from France).

Another objective of the program was to feature a wide variety of small to medium-sized institutions that included not only archives and libraries, but also cultural institutions such as art galleries and museums that are faced with preserving electronic records. For example, art galleries often include video art in their collections, but the needs of these electronic records are quite different than the needs of the electronic records typically found in archives and libraries. Thus, the speakers list included several individuals from the museum and gallery communities.

Finally, it was important that the program include some case histories that highlighted what various institutions have actually done or are doing to preserve electronic records. While discussing preservation strategies is important, seeing strategies actually being implemented and working in the real world provides useful information and models to follow. Among the case histories presented were the preservation of audio language recordings from Aboriginal elders in the Northwest Territories in

Canada, the preservation of American poet Robert Creeley's computer files, and the implementation of the Victorian Electronic Records Strategy (VERS) within the Government of the State of Victoria, Australia. The case histories were arguably the most useful aspect of a program that included something for everyone.

Special Events
In addition to the official program, a number of special events were incorporated in the symposium activities — including "Preservation Quest: How to preserve your home movies, CDs, videos, and more" (a special afternoon for the general public that is described in the accompanying article).

All delegates were invited to a welcoming reception following the first day's sessions. Hosted by LAC, this reception was attended by a number of dignitaries from the host institutions. In addition to welcoming remarks by National Archivist Ian Wilson and National Librarian Roch Carrier, special guest Senator Laurier Lapierre gave an entertaining speech. In this relaxed atmosphere, everyone had an opportunity to mingle and get to know each other.

A number of tours were offered throughout the week. Each day at lunchtime, symposium delegates had an opportunity to visit the state-of-the-art Audio Conservation Studio of LAC's Music Division. This tour was one of the highlights of the symposium, and everyone who took advantage of it came away impressed. Wednesday afternoon was set aside exclusively for tours, with a choice of visits to LAC's Gatineau Preservation Centre, the storage facility for electronic equipment at the Canada Science and Technology Museum, the conservation facilities of the National Gallery of Canada, and a data recovery service at Tunstall & Tunstall Inc. Because each delegate could select only one tour, there was much discussion and swapping of experiences at that evening's gala at the Canadian Museum of Civilization.

The festive evening began with a reception in the Riverview Salon hosted by CCI, followed immediately by a banquet in the Grand Hall — a spectacular venue with inspiring views of totem poles, the Parliament Buildings, and the Ottawa River. Charles Costain, CCI's Acting Director General, was Master of Ceremonies. Following a delicious dinner, Aboriginal storyteller Louise Profeit-Leblanc presented an alternate view of preserving oral history (i.e. by passing it down from one storyteller to another over the centuries). Musical entertainment by the Mick Armitage Band and dancing completed the evening's activities.

Another high point of the symposium was the unveiling of a marvellous new exhibit on the preservation of electronic records. Created by the Canada Science and Technology Museum and CCI, this exhibit was on display for the entire week. It has now returned to the Canada Science and Technology Museum where it will be on display for several months, after which it will travel to various host institutions across Canada.

Rounding out the symposium activities was a small trade show with vendors B.F.B. Sales Limited, the Canadian Institute for Historical Microreproductions, Crowley Micrographics Inc., and Carr McLean Limited. The AV Preservation Trust and all the organizing partners also had booths and staff on hand in the trade show area during the week.

Conclusion
All in all, the main goals of the symposium were achieved. Delegates left with a sense of the broader issues involved in collecting and preserving electronic records, as well as knowledge about the challenges that other institutions are facing and how they are dealing with them.

For those of us at CCI, the organization of this symposium has confirmed our belief in the value of partnering with other institutions. There were many aspects to this event, and the success of each was due to the collaboration among the organizing partners and the vast numbers of volunteers from each of the institutions who gave so freely of their time.

Symposium 2003 will be well remembered by all involved.

The Symposium 2003 organizing committee would like to thank the following companies for their sponsorship (e.g. coffee breaks, CDs, or CD cases) and support: Crowley Micrographics Inc., PromoMedia Group Inc., Tunstall & Tunstall Inc., Zomax Canada Company, and ROMifications Publishing Inc.

James MacDonnell, Senior Audio Conservator at Library and Archives Canada, demonstrating the preservation copying of 16" audio transcription discs.

Preservation Quest: How to preserve your home movies, CDs, videos, and more

by Linda Street, Senior Advisor

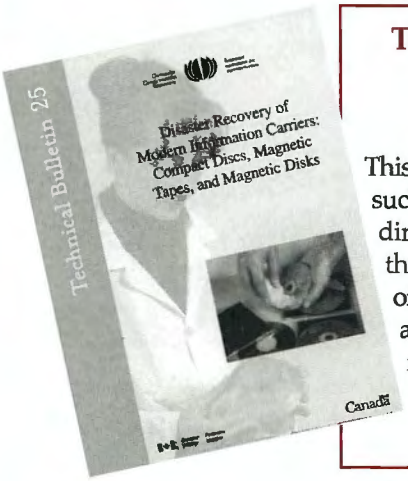
CCI has organized a number of symposia over the years, but this one marked the first time that an event was included for the general public. Organized in partnership with LAC, CHIN, and the AV Preservation Trust, "Preservation Quest: How to preserve your home movies, CDs, videos, and more" served as the kick-off event for Symposium 2003. Thanks to an extensive marketing and public relations campaign, the day was an unmitigated success.

When the doors of LAC were thrown open on Sunday, September 14, 2003, more than 400 people of all ages arrived to learn more about preserving their home movies, CDs, videos, photos, etc. The activities included a series of information sessions in the Auditorium, an interactive exhibit from the Canada Science and Technology Museum and CCI, a short video ("Fading Away: Canada's Audio-Visual Heritage since 1896") produced by LAC, and a special children's corner. Visitors could also tour the LAC's state-of-the-art Audio Conservation Studio, get answers to individual questions in the "Ask the Experts" area, and pick up an assortment of free handouts on how to preserve various types of electronic records.

Guest of honour was Dr. Joe Schwarcz — professor at McGill University, popular radio and television personality on the Discovery Channel and Montreal's CJAD-TV, columnist for the *Montreal Gazette* and *The Washington Post*, and Director of the McGill Office for Chemistry and Science. "Dr. Joe" is well-known for his ability to make difficult scientific issues accessible to the general public. His humorous and thought-provoking presentations dealt with paper preservation throughout history and the science of movies. He drew an enthusiastic response from the packed auditorium.

The brisk pace of the day was maintained by Master of Ceremonies Ken Grant (a well-known local radio host and celebrity affectionately dubbed "The General"), who was ably assisted by Chantal Fortier from the Department of Canadian Heritage. These two kept people up-to-the-minute on what activities were taking place throughout the afternoon. They were assisted by an army of volunteers from the host organizations who guaranteed that everything ran smoothly.

Despite a few glitches — such as too few translation headsets and running out of cookies and juice — the day was a smash hit. Some people suggested we take the show on the road, others asked where they could buy the special T-shirt sported by all volunteers, and still others made suggestions for future events. "Preservation Quest" proved that the public has a genuine interest in preserving their electronic records, and that the host institutions are indeed accessible and relevant to Canadians.



Technical Bulletin No. 25 Disaster Recovery of Modern Information Carriers: Compact Discs, Magnetic Tapes, and Magnetic Disks

by Joe Iraci

This bulletin summarizes some procedures for the disaster recovery of modern information carriers such as CDs, magnetic diskettes, and magnetic tapes following immersion in tap water, seawater, and dirty water. Procedures are also given for dealing with media that have hard-to-remove deposits on them or have been exposed to heat, dust/dirt, mould, and shock. These procedures are a compilation of information from the few case histories published, recommendations made by experts in the field, and research performed at the Canadian Conservation Institute. The information in this bulletin represents one piece of a comprehensive disaster plan; for disasters to be handled effectively, other key elements such as those dealing with disaster preparedness also need to be in place.

ISBN 0-662-33031-5 – paperback, 15 pp. – 2002 – In Canada: CAN$10 – Other countries: US$10

CCI's Director General Bill Peters Retires

by Charlie Costain, Acting Director General, and Linda Street, Senior Advisor

Bill Peters, the sixth Director General of the Canadian Conservation Institute, retired in July 2003 after 37 years in the Public Service of Canada.

Prior to his arrival at CCI in the summer of 1995, Bill had spent three years as Director General of the Heritage Branch in the Department of Canadian Heritage and two years in the Historic Sites Directorate of Parks Canada. With this background, he brought to the Institute a thorough understanding of the Canadian heritage community.

Under Bill's leadership, CCI's horizons expanded to include emerging issues such as Aboriginal and multicultural collections, the architectural interiors of Canada's most culturally significant buildings (such as the Parliament Buildings), and the need to contribute actively to policy development to ensure the adequate protection of Canada's moveable cultural property. At the same time, he encouraged the continued development of CCI's core strength — the symbiotic relationship between scientific research and conservation treatment (the results of which have provided major contributions to conservation activities worldwide). He also made sure that CCI's knowledge base, the services it provides, and its strategic directions reflected the practical realities and needs of Canadians by seeing to it that consultations with the heritage community were conducted and continued on an ongoing basis. Linked to this was his direction to staff that client satisfaction be regularly assessed, measured, and analysed so that improvements could be made as needed.

All of this was achieved in the face of budget reductions and diminished fiscal expectations. To ensure that CCI was as focused as possible, he involved staff in a period of intense examination of many critical issues including policy, organizational structure, client satisfaction, and staff morale, values, and principles, to name but a few. And he saw to it that many of their recommendations were adopted. This resulted in an improved planning cycle for the organization and a heightened awareness of client needs and satisfaction. Systems were streamlined, reporting relationships were clarified, revenue generation possibilities were explored and pursued, and the organizational structure was revised. Partners were engaged in collaborative efforts and projects, one of the most fruitful of which was with the Heritage Conservation Program of Public Works and Government Services Canada (PWGSC). CCI and PWGSC have now worked together on a number of projects on Parliament Hill, with CCI contributing to the identification and specifications for preserving the heritage interiors of these significant buildings. Efforts such as these have increased the efficiency, effectiveness, and accountability of the Institute.

Bill had a strong background in communications, and knew the importance of sharing information and broadening the Institute's base of relevance. He encouraged staff to find opportunities for CCI to increase its ability to reach out beyond the heritage community and provide service to a broad range of clients. His guidance and encouragement were motivating factors in the improvement of CCI's original Web site and the creation of a new one. This new site — "Preserving my Heritage" — is designed to raise public awareness about the importance of conservation, and provides an opportunity for members of the general public to access information that will help them protect their own personal treasures.

As another means of making information, knowledge, and expertise broadly accessible, Bill encouraged CCI's publication program and its education and training efforts. Once again, he ensured that the Institute constantly sought constructive criticism from its clients and partners in order to continually improve these efforts. Ongoing dialogue was always important to Bill.

The creation of a positive, healthy working environment for CCI staff was one of Bill's priorities. He had great confidence in the abilities of his staff to exercise proper judgement, and he never hesitated to give them the authority to act when he believed it to be in the best interests of the Institute. His open door policy reflected the care and concern

Bill had for his team, which included all members of CCI staff. The building of staff morale was always a work in progress.

As a "people manager," Bill focused on both the physical and emotional work environment of his staff. Accommodation difficulties at CCI during his tenure contributed greatly to the complexity of these issues. By the late 1990s, the CCI facility at 1030 Innes Road had become inadequate, inefficient, and costly. In addition, a toxigenic mould species found in the perimeter wall cavity required immediate remedial action. Following an extensive cost-benefit analysis, it was decided that the building should be refurbished to extend its life by another 10 years. Bill initiated the process that would eventually lead to replacement of all windows and the roof membrane, as well as the remediation and retrofit of the building.

Bill's contribution to CCI may be measured by the fact that, under the influence of his wisdom, experience, personality, and approach, the Institute continued to occupy its place as a cornerstone of national and international conservation activities. As a result of his efforts, CCI remains vital to the ongoing strength of the Canadian heritage community.

Retirement of Conservator Peter Vogel

by Robert L. Barclay, Senior Conservator, Treatment and Development Division - Objects

After 29 years with the Canadian Conservation Institute (CCI), paintings conservator Peter Vogel retired in May 2003.

Before Peter came to CCI in 1974, he had already begun a conservation career in Europe, which would lay excellent groundwork for the future. He studied the history of art in Cologne and Stuttgart. Between 1958 and 1962, he trained in conservation at the Institute for Technology of Fine Arts in Stuttgart. During this time, he also studied briefly the conservation methods applied to Byzantine and Russian icons at the Russian State Conservation Centre in Moscow. He then worked for a period on the collection of the State of Hessen in Darmstadt, treating medieval polychrome sculptures and altarpieces. In 1966, he decided to head west over the ocean to take up the post of Head of the Picture Restoration Division at what was then called the National Library and Public Archives of Canada. Then, between 1967 and 1974 he was a conservator at the National Gallery of Canada. In 1974, he became Consultant Conservator, Fine Arts and Polychromes at CCI, where he remained for the rest of his career.

Peter developed specialties and connoisseurship in various areas. His great knowledge of European paintings and sculpture was applied and further developed through his work on such influential Quebec paintings as *La Mise au tombeau* (by Jean-Jacques Lagrenée) and *Le Songe de St. Joseph* (attributed to Jean Baptiste de Champagne) from the Desjardins Collection. He found very different techniques and unconventional approaches in these Quebec paintings. Peter praises Mervyn Ruggles, paintings conservator at the National Gallery of Canada, for the insights and deep knowledge he shared so freely during their association. Having treated two large paintings by Antoine Plamondon, Peter developed an intimate knowledge of that artist's technique and of others who painted in his style.

Peter's European experience served him well in his approach to the German wood sculptures on the altarpiece of the Church Built in a Day from the Archdiocese of Halifax, Nova Scotia. The sensitivity for the treatment of Byzantine and Russian icons that he had gained in Moscow came to the fore when he advised on and treated several Ukranian icons from the the Basilian Fathers Museum in Mundare, Alberta. On a quite different track, he began a long and close technical relationship with the works of Native Canadian painter Norval Morrisseau.

One of Peter's major areas of interest was the copying of artist's techniques. He often discussed bringing all this information together in a publication, and we would all love to see this happen. Perhaps it will become a focus of effort during his retirement years.

Peter Vogel: An Appreciation

by Robert L. Barclay, Senior Conservator, Treatment and Development Division - Objects

I am sure that during Peter Vogel's formative years working in Europe on Byzantine and Baroque works of art, he was also developing and refining his unique sense of humour, which contains elements of both the baroque and the byzantine. Such training — if, indeed, it extended beyond working on the objects themselves — would stand him in good stead in his future at CCI.

My association with Peter began when I started work at CCI in 1975 as one of a group of conservators-in-training, initially under his direction. In those days the Institute worked out of three downtown buildings. All the equipment and facilities for paintings conservation were crammed into half of one floor of a building on the corner of Albert and Bank streets. The patience Peter showed to a gaggle of new and completely inexperienced trainees, in the most cramped and inadequate of spaces, was little short of saintly. Although we soon relocated to a new building in which things became more orderly, the demands upon Peter for his expertise and knowledge only increased. When I moved to Furniture and Wooden Objects, I was sorry to lose such a fine mentor, but he remained a close colleague and friend and continued to share both his professional knowledge and his increasingly important sense of fun.

Peter was always fully engaged in the many CCI sporting activities, and excelled in his own particular and very idiosyncratic way in soccer, hockey, table tennis, and crokinole. However, one characteristic in particular stands out in my mind — his love of language. He would often consult me on the use and derivation of certain words, thinking perhaps that my own joy in wielding words betrayed some deeper understanding of them. Often he would challenge me with an exotic and esoteric piece of grammar or syntax. I would come away from these discussions and research learning as much as he did. It was wonderful to me that someone for whom English is a second tongue (Peter's native language is German) could have such a superb command of the nuances of probably the worst language to learn on the planet. It takes a special kind of genius to make elaborate plays on words in two languages, and he has that.

Peter at work on La Mise au tombeau, *an oil-on-canvas painting from the Musée du Québec.*

Peter is eccentric, and I'm sure he would be the first to agree. However, when I use the word eccentric to describe him, I use it in the kindest and most positive sense. In an organization run by a bureaucracy, it is always the path of least resistance to slip into patterns of established normality. But it's a form of human camouflage to which Peter never succumbed. He didn't break the rules nor did he flaunt them, but within the parameters established by the workplace he was vibrantly creative and deliciously unpredictable. Institutes such as CCI, which are full of creative and energetic individuals, naturally encourage and nurture such eccentricity. Or at least they should, because it is such a positive force in maintaining staff morale. Anybody can be trained to do a job and do it well, but their true measure is in the value they add by being who they are. And Peter gave generously.

Now that Peter has retired from CCI there is a definable vacuum, certainly in the professional sphere at which he excelled, but also, and I think more importantly, in the social sphere. This sphere of personalities and interactions, found in the labs and in the lunch room, is where the true heart of an institute is found and by which it is judged. All the staff who knew Peter well, and worked and played with him over the years, are fortunate that, as a respected alumnus, he continues to maintain close ties. It would not be in his nature to turn away from all the fun we have had for all these years.

Upcoming Workshops

CCI's educational initiatives are an essential means of communication. They allow us to share the results of our current research and conservation practices with you, the heritage community, while simultaneously learning about your emerging needs and concerns. We are pleased to provide the following workshops in collaboration with various Canadian heritage associations and organizations across Canada during 2003-2004. Additional workshops will be posted on our Web site at www.cci-icc.gc.ca [under Learning Opportunities] as they are confirmed.

Fall 2003

Mount-making
Hosts(s): Société des musées québécois
Location: David M. Stewart Museum, Montreal, QC
Date: November 5–6, 2003
Contact(s): Manon Lapointe
Tel.: (514) 987-3264
E-mail: lapointe_m@smq.uqam.ca
Leader(s): Carole Dignard, André Bergeron (Centre de conservation du Québec)

Artifacts in Aboriginal Cultural Centres
Hosts(s): Prince of Wales Northern Heritage Centre
Location: Yellowknife, NT
Date: November 14–15, 2003
Contact(s): Rosalie Scott
Tel.: (867) 873-7664
E-mail: Rosalie_Scott@ece.learnnet.nt.ca
Leader(s): Tom Stone, Janet Mason

Mount-making
Hosts(s): Master of Art Conservation program, Queen's University
Location: Kingston, ON
Date: November 20–21, 2003
Contact(s): Krysia Spirydowicz
Tel.: (613) 533-6000
E-mail: spirydow@post.queensu.ca
Leader(s): Carole Dignard, Bob Barclay

Packaging of Ceramics and Glass for Travel
Hosts(s): Burlington Art Museum
Location: Burlington, ON
Date: November 29, 2003
Contact(s): George Wale
Tel.: (905) 632-7796
E-mail: programs@burlingtonartcentre.on.ca
Leader(s): Paul Marcon, Judy Logan

Winter 2004

Art in Transit
Hosts(s): Sir Sandford Fleming College
Location: Peterborough, ON
Date: January or February 2004
Contact(s): Gayle McIntyre
Tel.: (705) 749-5530
E-mail: gmcintyr@flemingc.on.ca
Leader(s): Paul Marcon

Emergency and Disaster Preparedness for Cultural Institutions
Hosts(s): Ontario Association of Art Galleries
Location: Tom Thomson Memorial Art Gallery, Owen Sound, ON
Date: February 2–3, 2004
Contact(s): Margot Berrill
Tel.: (416) 598-0714
E-mail: programs@oaag.org
Leader(s): David Tremain, Deborah Stewart

Mount-making
Hosts(s): Association of Manitoba Museums
Location: Winnipeg, MB
Date: February 12–13, 2004
Contact(s): Monique Brandt
Tel.: (204) 947-1782
E-mail: amm@mts.net
Leader(s): Bob Barclay, Carole Dignard

Storage Planning for Cultural Facilities
Hosts(s): Museums Alberta
Location: Edmonton, AB
Date: February 13–14, 2004
Contact(s): Carrie Herrick
Tel.: (780) 424-2626
E-mail: learning@museumsalberta.ab.ca
Leader(s): Siegfried Rempel

Modern Information Carriers
Hosts(s): Saskatchewan Council for Archives and Archivists
Location: Regina, SK
Date: March 3–4, 2004
Contact(s): Joe LeClair
Tel.: (306) 798-4015
E-mail: jleclair@usask.ca
Leader(s): Joe Iraci

Permanence of Artists' Materials
Host(s): Art Gallery of Nova Scotia
Location: Halifax, NS
Date: March 3–4, 2004
Contact(s): Laurie Hamilton
Tel.: (902) 424-2926
E-mail: hamill@gov.ns.ca
Leader(s): Debra Daly Hartin, Edward Kulka

CCI Services: Lectures, Workshops, and Site Visits

In cooperation with provincial museum and art gallery associations, CCI responds to specific needs within the heritage community by offering workshops, lectures, and site visits related to the conservation and care of museum and art gallery collections. CCI staff also participate in and present lectures to meetings of professional groups and associations.

For the period May 1 to October 31, 2003, CCI staff were involved in the following activities:

Conferences

Canadian Archaeological Association 36th Annual Meeting, Hamilton, ON, May 7–10, 2003 — Tara Grant attended to strengthen CCI's ongoing relationship with the archaeological community.

Canadian Museums Association 56th Annual Conference, Winnipeg, MB, May 6–10, 2003 — CCI participated in the trade fair where the booth was staffed by Mary-Lou Simac, Renée Dancause, Paul Marcon, Lucie Paquette, and Myles Bailey (of the Canada Museum of Science and Technology); Charlie Costain also attended.

American Association of Museums Annual Meeting & Museum Expo 2003, Portland, OR, May 18–22, 2003 — CCI participated in the trade fair where the booth was staffed by Mary-Lou Simac, Linda Street, and Jean Tétreault.

Canadian Association for Conservation of Cultural Property (CAC) 29th Annual Conference, Victoria, BC, May 22–25, 2003 — Charlie Costain presented the Per Guldbeck Memorial Lecture "Three Wise Men, and their Role as Leaders in the Conservation Profession"; Kate Helwig presented "Examination of Selected Materials from the Studio of Yves Gaucher" (co-authored with Marie-Chantale Poisson, a student in the Master of Art Conservation program at Queen's University); Sherry Guild presented "Mould Growth in Heritage Collections — Collection Recovery"; Michael Harrington presented "Rehabilitation of Judges Chairs and Bench, Supreme Court of Canada (co-authored with Alain Vermette, Project Manager, Public Works and Government Services Canada (PWGSC) and John Ward, Heritage Architect, Heritage Conservation Program, PWGSC); Paul Marcon presented "RH Control Module for Display Cases — A New Design with High Output Capacity" (co-authored with Stefan Michalski and Myles Bailey, Canada Museum of Science and Technology); Jan Vuori also attended and everyone assisted Shanna Ramsay in the CCI booth at the trade fair.

American Institute for Conservation of Historic and Artistic Works (AIC) 31st Annual Meeting, Arlington, VA, June 5–10, 2003 — CCI participated in the trade fair where the booth was staffed by Christine Bradley, Mary-Lou Simac, and Charlie Costain; Carole Dignard presented a talk and poster "A Closer Look at the Gentle Art of Applied Pressure."

Fifth World Archaeological Congress WAC-5, Washington, DC, June 21–26, 2003 — Judy Logan presented "Conservation in the Field: Achievable Goals" and chaired the session "Achievable Goals: Conservation Choices for the Real World."

The Galpin Society Conference on Musical Instruments, Oxford, UK, August 2–3, 2003 — Bob Barclay received the Anthony Baines Memorial Prize for contributions to the study, history, and care of historic musical instruments.

Denver X-Ray Conference 2003, Denver, CO, August 4–8, 2003 — Marie-Claude Corbeil presented "Applications of X-ray Diffraction in Conservation Science and Archaeometry" as part of the plenary session devoted to "X-ray Studies of Art and Archaeological Objects."

Moulds, Health and Heritage International Conference in Braunschweig, Germany, September 4–5, 2003 — Maureen MacDonald attended the conference, and also visited with staff at the Netherlands Institute for Cultural Heritage (ICN) laboratories in Amsterdam and the Vice-Director of the Department of Conservation and Restoration at the University of Applied Arts in Vienna.

NACE International - The Corrosion Society Annual Conference 2003, Ottawa, ON, September 15–17, 2003 — Bob Barclay presented "Deterioration *In Situ* of Historic Spacecraft."

ICMS (ICOM International Committee on Museum Security) Annual Conference 2003, Basel, Switzerland, September 14–17, 2003 — David Tremain attended to keep abreast of current knowledge in the subject area and strengthen professional relationships.

5th International Congress on Lasers in the Conservation of Artworks (LACONA V), Osnabrueck, Germany, September 15–18, 2003 — Carole Dignard presented "The Cleaning of Soiled White Feathers Using the Nd:YAG Laser and Traditional Methods."

Ontario Museum Association 2003 Colloquium "Issues in Contemporary Collecting," Hamilton, ON, September 16, 2003 — Scott Williams gave the keynote address "Collecting the Contemporary: Preservation Issues."

Lectures

"The Importance of Conservation to Cultural Communities" was presented by Michael Harrington on June 6, 2003, at the York Region Funders Forum in Newmarket, ON.

"Time Capsules: Longevity and Security" was presented by Bob Barclay on September 17, 2003, at the monthly meeting of the Rideau Township Historical Society, North Gower, ON.

"The Science of Wood — Three Things to Remember about the Wood in your Site" was presented by Michael Harrington on October 7, 2003, at a meeting of the National Historic Sites Alliance for Ontario in Sharon, ON.

Workshops

Care and Preservation of Musical Instruments was presented by Bob Barclay on May 5–6, 2003, at the Cantos Music Museum in Calgary, AB.

Aboriginal Facilities Development was presented by Brian Laurie-Beaumont and Siegfried Rempel on May 28–30, 2003, for the Ontario Museum Association in Manitoulin Island, ON.

Construction of Mannequins for Historic Costumes was presented by Janet Wagner and Renée Dancause on September 27–28, 2003, for the Museum Association of Newfoundland and Labrador in Bird Cove, NL.

CCI's PVAC, Acrylic and VAE Adhesive Research and Some Aspects of Skin and Leather Bonding was presented by Jane L. Down on September 29, 2003, at the Adhesive and Leather Symposium, which was part of the "Topics in Conservation Science" series presented by the Library of Congress Preservation Directorate in partnership with the Folger Shakespeare Library in Washington, DC.

Storage Planning for Cultural Facilities was presented by Siegfried Rempel on September 29–30, 2003, for the Ontario Museum Association and the Ontario Historical Society in Minesing, ON.

Emergency and Disaster Preparedness for Cultural Institutions was presented by Deborah Stewart and David Tremain on October 20–21, 2003, for the Archival Association of British Columbia at the Maritime Museum of British Columbia in Victoria, BC.

Artifacts in Aboriginal Cultural Centres was presented for the first time by Tom Stone and Janet Mason on October 22–23, 2003, at the Yukon Arts Centre in Whitehorse, YT.

Preservation of Historical Furniture was presented by James Hay and Alastair Fox on October 23–24, 2003, for the Prince Edward Island Museum and Heritage Foundation in Charlottetown, PE.

Plastics in Museums was presented by Scott Williams on October 24, 2003, for students in the Master of Art Conservation program at Queen's University in Kingston, ON.

Site visits for facilities development or upgrading

Site visits conducted by Siegfried Rempel and/or Brian Laurie-Beaumont include the following:

British Columbia — Nelson & District Museum, Nelson; Canadian Museum of Rail Travel, Cranbrook.

Alberta — Metis Nation of Alberta, Victoria Landing; Naval Museum of Alberta, Calgary; Provincial Museum of Alberta, Edmonton.

Manitoba — Transportation Heritage and Technology Centre, Winnipeg Art Gallery, and Métis Resource Centre, Winnipeg; Métis Interpretation Centre, Saint Laurent; National Residential School Museum, Portage la Prairie.

Ontario — Kitchener-Waterloo Art Gallery, Kitchener; Peterborough Centennial Museum and Archives, Peterborough; Agnes Etherington Art Centre, Kingston; Museum of Contemporary Canadian Art, Toronto; Wikwemikong Heritage Centre, Manitoulin Island.

Quebec — Canadian Aviation Heritage Centre, Montreal.

Yukon — Kwanlin Dun Cultural Centre, and Old Log Church Museum, Whitehorse; Carcross/Tagish Interpretation Centre, Carcross; George Johnston Museum, and Teslin Tlingit Cultural Centre, Teslin; Danoja Zho Cultural Center, Dawson; Binet House Interpretive Centre, Mayo; Keno City Mining Museum and Alpine Interpretive Centre, Keno.

Nunavut — Nunavut interpretation centres, Iqaluit.

Northwest Territories — Hay River Museum, Hay River; Northern Life Museum and National Exhibition Centre, and Métis Cultural Institute, Fort Smith; Ndilo Cultural Interpretation Centre, Prince of Wales Northern Heritage Centre, and Heritage Mining Museum, Yellowknife.

Other site visits

The University of Lethbridge Art Gallery, Lethbridge, AB, May 7, 2003 — Bob Barclay consulted on the mounting and support of a bronze sculpture *Moses* by Sorel Etrog.

Sharon Temple National Historic Site and Museum, Sharon, ON, May 30, 2003 — Bob Barclay consulted on care and preservation of pipe organs by Richard Coates.

Manotick United Church, Manotick, ON, June 10–11, 2003 — Bob Barclay opened a time capsule from 1903 and consulted on preservation of the contents.

Coordinación Nacional de Restauración del Patrimonio Cultural, CNCA-INAH, Mexico City, Mexico June 9–15, 2003 — Tara Grant met with Alejandra Alonso-Olvera, Restaurador Dictaminador, to inspect the condition of wooden sculptures from the Olmec period (Ms. Alonso-Olvera will bring the sculptures to CCI for treatment next year).

Royal Saskatchewan Museum, Regina, SK, July 7–8, 2003 — Jane Sirois and Tom Stone tested natural history specimens for traces of arsenic, mercury, and lead pesticides.

Glenbow Museum, Calgary, AB, July 10–11, 2003 — Jane Sirois and Tom Stone tested ethnographic and natural history specimens for traces of arsenic, mercury, and lead pesticides.

Igloolik Field Excavation, Igloolik, NU, July 11–27, 2003 — Tara Grant provided field conservation for the excavation of several Pre-Dorset sites (excavation conducted by Dr. D. Stenton, Director of Heritage, Department of Culture, Language, Elders and Youth, Government of Nunavut, and Dr. R. Park, University of Waterloo).

Senate Banking and Commerce Committee Room, Parliament Hill, Ottawa, ON, July 17 – September 5, 2003 — Wendy Baker, Robert Arnold, Debra Daly Hartin, and Helen McKay, assisted by private conservator Mary Piper Hough, conducted emergency stabilization of the painted ceiling and some architectural elements as well as ongoing treatment of marouflaged paintings; Nancy Binnie conducted colour analyses and Kate Helwig carried out paint layer analysis in support of this work; and James Hay directed the work of Keitel Furniture Repair during the reinstatement of four doors to their original finish.

Colony of Avalon, Ferryland, NL, July 24 – August 21, 2003 — Charlotte Newton worked in the field conservation lab at the excavation of Avalon (excavation conducted by the Memorial University of Newfoundland).

Wilder/Davis Luthiers, Montreal, QC, September 3, 2003 — Bob Barclay consulted with Tom Wilder regarding a projected publication on violin and bow restoration and care.

Nepean Museum, Ottawa, ON, September 8, 2003 — Bob Barclay and Siegfried Rempel examined storage facilities and provided advice.

The Bytown Museum, Ottawa, ON, September 19, 2003 — Bob Barclay examined the storage area and prepared a report.

McCord Museum, Montreal, QC, October 14–16, 2003 — Jane Sirois and Jennifer Poulin non-destructively analysed a selection of objects using portable X-ray fluorescence spectrometry to detect the presence of possible pesticide residues such as arsenic, mercury, and lead; micro-vacuum samples of particulate material were also taken from the surface of the objects for further analysis in the lab at CCI.

Redpath Museum, McGill University, Montreal, QC, October 16–17, 2003 — Jane Sirois and Jennifer Poulin non-destructively analysed natural history specimens using portable X-ray fluorescence spectrometry to detect the presence of arsenic, mercury, and lead.

Awards

A number of CCI staff were honoured with Departmental awards during Public Service Week in June 2003:

Bill Peters and Charlie Costain each received a People Management Award; David Grattan received a Deputy Minister's Award for his work with the International Council of Museums Committee for Conservation; and the team comprising Charlie Costain, Renée Dancause, Bruce Gordon, David Grattan, Colette Landry, Linda Leclerc, Joy Patel, Lise Perron-Croteau, Tom Stone, and Season Tse received a Deputy Minister's Award for work on the CCI Competencies Project.