



Canadian
Conservation Institute

Institut canadien
de conservation

Canada



Annual Review 2012–2013

Canadian Conservation Institute





2012–2013 ANNUAL REVIEW

- ▶ Canadian intern Stephanie Barnes, shown analyzing the materials of French Canadian artist Louis Dulongpré (1759–1843) (left). CCI 120449-0010
- ▶ Conservator Greg Hill and intern Stéphanie Ledamoisel from France work on the treatment of early 20th-century oversized degraded silver gelatine panorama prints of Niagara Falls in winter 1912 and summer 1913. The prints bear the inscription "Largest One-Piece-One-Exposure Enlargements in the World" (right). CCI 122551-0104



ANNUAL REVIEW OBJECTIVE:

Through this Annual Review, the Canadian Conservation Institute (CCI) presents results achieved in 2012–2013 to the [Department of Canadian Heritage](#), to CCI clients and partners in Canada and around the world, and to the Canadian public.

CCI'S MISSION

Through its expertise in conservation science, treatment and preventive conservation, CCI supports heritage institutions and professionals in conserving Canada's heritage collections so they are accessible now and in the future.

To achieve its mission, CCI organizes its operations under three business lines:

- 1. research and development in conservation**, including scientific research, advanced techniques for treatment and restoration, and practical and innovative solutions for caring for collections
- 2. equitable provision of expert services**, including scientific services, conservation treatments and preservation advisory services, to heritage institutions and professionals
- 3. dissemination of conservation knowledge**, through training, professional development, online learning materials and publications, to assist those responsible for heritage objects and collections to make informed decisions about the care of their collections.

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MESSAGE FROM MINISTER

As Minister of Canadian Heritage and Official Languages, I have the pleasure to present the Canadian Conservation Institute's *Annual Review 2012–2013*. This report underscores the achievements of the Institute over the past year and reflects the outstanding work that it accomplishes to highlight our rich heritage in cooperation with heritage institutions and museums.

Every day, the men and women of the Canadian Conservation Institute seek to ensure the preservation of objects and collections that are part of our history. The passion that drives these conservation experts and the professionalism that they demonstrate contribute to the reputation of excellence that the Institute has enjoyed for more than 40 years.

On the road to Canada's 150th birthday in 2017, I encourage Canadians across the country to visit heritage institutions and museums to discover and celebrate our history—especially during Canada History Week, which happens each year in July. I congratulate the Institute and everyone who works together to help us better understand the origins of our country, our freedoms, and our democracy.

The Honourable Shelly Glover



DIRECTOR GENERAL'S MESSAGE

It gives me great pleasure to share with you, our clients, partners and Canadians, the major accomplishments of the Canadian Conservation Institute (CCI) in fiscal year 2012–2013.

I have always been amazed by the number of heritage institutions and professionals that CCI reaches, given its size and the challenges presented by Canada's geography. However, while we can only provide conservation treatments for a select number of the most significant heritage objects and works of art, the impact of our work extends immeasurably because the objects we treat and the collections we help to conserve can be safely displayed in heritage institutions for Canadians and visitors from around the world. In addition to our work in treatments and services, CCI's greatest outreach to heritage professionals and institutions is through the sharing of our knowledge and the dissemination of the results of our research. These are accomplished through professional development activities, online resources, publications, advice and library services—with the goal of enabling heritage professionals to care for the objects and collections under their stewardship. I also find the diversity of our clients astounding—from provincial museums to Aboriginal cultural centres, from historic buildings in the National Capital Region to archives across the country, and from large art galleries to small community museums. We are able to serve these various clients often through partnerships, such as with provincial and territorial museum associations and organizations, Library and Archives Canada, the Centre de conservation du Québec, and the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCRROM). We also study and treat diverse materials, from digital media to Aboriginal objects dating back to the early 1800s. Often, these items are heritage objects or works of art that are concrete examples of significant events in Canada's history, such as Confederation, the War of 1812 and the installation of the carillon in the Peace Tower on Parliament Hill.

CCI also recently marked its 40th anniversary and, coincidentally, the release of the results of its [first formal evaluation](#). The evaluation demonstrated, without question, the critical role CCI plays in supporting Canadian museums and other heritage institutions; our leadership in Canada and around the world; our impact on the knowledge and skills of heritage professionals and workers; the value of the services we provide; and the economies of scale that our unique business model enables.

In the summer of 2012, we began to lay the groundwork for implementing the major recommendations of the evaluation: a long-term research plan, an integrated approach to professional development for heritage professionals, and a talent management plan to ensure that CCI has the right experts in place to achieve its strategic objectives. The major recommendation was to develop a five-year strategic plan to address the central question: What should CCI do to focus its knowledge and expertise to ensure the greatest impact on the preservation of, and safe access to, Canada's significant heritage objects and collections?

To ensure this plan addresses the priority needs of heritage professionals and institutions in Canada, we launched a process to engage our clients and partners in a focused discussion to identify the current and future challenges heritage institutions and professionals face in preserving their collections and making them safely accessible.



We held seven focus groups with decision makers—CEOs and directors of museums and other heritage institutions, managers of collections and conservation—across Canada and with the national museums and archives. Our staff and managers also conducted 69 one-on-one interviews with heritage professionals. We also consulted with the provincial museum associations and the Canadian Association for Conservation.

The major challenges were consistent across all groups: managing facilities (storage, environmental conditions); ensuring safe access to collections; managing electronic and digital collections; understanding and conserving both contemporary and traditional materials; and continued access to conservation expertise.

The next step will be to determine the most effective way CCI can address these challenges, either directly or working through or with other sources of support and expertise.

This was also a significant year for me personally. Some time ago, I had decided to retire from the Government of Canada in April 2013. My plan was to finish some key projects, the most important being to launch and complete our consultations with clients and partners, and to consolidate the findings for the next Director General of CCI.

Leading CCI for more than eight years has been an extraordinarily rewarding experience for me—both personally and professionally. While there have been challenges during this period, I have always felt that I have been working on behalf of an incredible organization that directly supports the needs of its clients. I have been and always will be proud to have been the Director General of CCI, and to have contributed to its role in preserving Canada's history and protecting its heritage.

Everyone who works at CCI, or has worked here in the past—from building services to client relations, from scientists to conservators—contributes to the overall success of this organization. It is the combination of their dedication, passion, knowledge and experience that results in the conservation of the real evidence of Canada's diverse history. They are the reason CCI is so highly valued in Canada and so highly respected internationally.

A handwritten signature in black ink, reading "Jeanne E. Inch".

Jeanne E. Inch
Former Director General and Chief Operating Officer (retired)

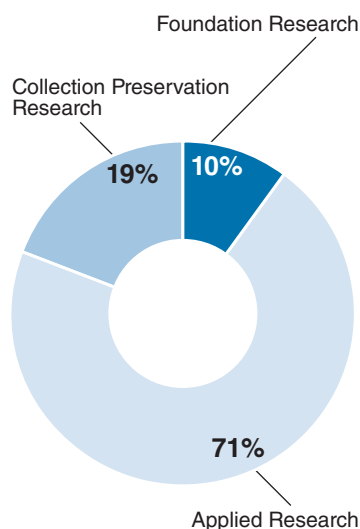


RESEARCH AND DEVELOPMENT

Performance in 2012–2013

ACTIVITIES – OUTPUTS

41 projects were active in Foundation Research, Applied Research and Collection Preservation Research; 23 partners (13 Canadian and 10 foreign) contributed to CCI research and development projects.



PERFORMANCE INDICATORS

INDICATOR	RESULTS IN 2012–2013
Canadian and international community has access to the results of CCI research and development activities	<ul style="list-style-type: none"> • 12 scientific and technical articles and one book (thesis) authored by CCI staff were published externally (see complete list on page 24) <ul style="list-style-type: none"> » 2 articles in Canadian publications » 10 articles and one book published by foreign publishers • 15 scientific and technical presentations were given to professional conservation audiences <ul style="list-style-type: none"> » 3 presentations at Canadian conferences/educational institutions » 12 presentations at international conferences or in foreign educational institutions

RESEARCH AND DEVELOPMENT HIGHLIGHTS

Evaluating Risk for Integrated Pest Management (IPM)

The research project entitled *Evaluating Risk for Integrated Pest Management* investigated risks to cultural property from certain biological factors and how they can be assessed. By assessing problems from pests in the protection of cultural property and examining solutions, collections care professionals can have greater confidence in their decisions. Procedures like thermal treatment and controlled-atmosphere fumigation have replaced the use of chemicals and reduced exposure to reactive gases in many applications.

This shift, however, has introduced new risks. Establishing efficacy, considering side effects of unfamiliar control applications, and determining how to construct systemic programs to reduce the risk of pest damage across a wide range of conditions are common challenges to the decision process of implementing IPM. This research project shows how elements from insect population modelling could be applied to pests in cultural property and examines fungal data and models with the goal of protecting the most susceptible objects. It also presents information on how to prevent harm as well as how to evaluate the potential for harm to objects from thermal and fumigant treatments of objects. Details on how to implement IPM have been published as part of this research project so that small to large institutions have the means to engage in this task.

In December 2012, Thomas Strang, Senior Conservation Scientist, published his PhD thesis, *Studies in Pest Control for Cultural Property*, at the University of Gothenburg, Sweden. With this publication, CCI has completed this research project.

>> KUDOS CORNER

I appreciated new information about flash media and longevity.

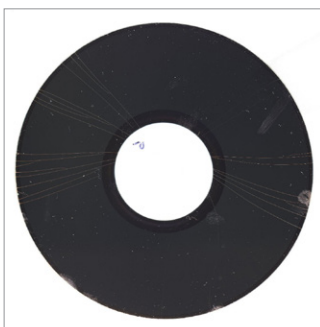
Participant, Modern Information Carriers Workshop

The Stability of Blu-ray Optical Discs and Flash Media

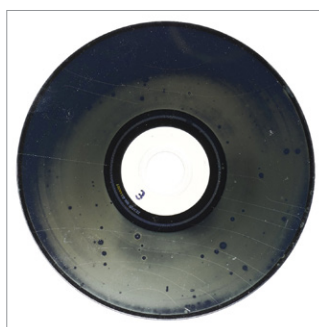
As heritage collections increasingly contain digital materials, organizations are facing issues about what type of information carriers to use for information storage, such as Blu-ray optical discs or flash media, and how to care for such materials when receiving them as additions to their collections. There are concerns about the stability and deterioration of these information carriers and little information is available in the literature to address these issues. As a result, significant uncertainty exists as to whether digital information carriers like Blu-ray discs and flash media will last over the long term or should be used at all.

To investigate this problem, CCI conducted accelerated aging experiments using standard test methods. A variety of Blu-ray movie discs as well as several different brands of recordable and erasable Blu-ray media, flash cards and USB flash drives were exposed to elevated temperature and relative humidity conditions and tested for errors at various intervals before and after exposure to the aging conditions.

▼ Recordable Blu-ray discs showing deterioration after accelerated aging.



CCI 122140-0001



CCI 122140-0002



CCI 122140-0004

▼ A variety of USB flash media that have been exposed to accelerated aging. Although distorted, the media can be read without any problems or errors.



CCI 122142-0001

The results of the experiments, led by Joe Iraci, Senior Conservation Scientist, indicated that flash media are very stable and survived accelerated aging tests well. When compared to past experimental work at CCI, flash media showed similar stability to the very stable gold recordable CD. Early indications are that flash media have potential for being a suitable choice for longer-term reliable information storage. The same cannot be said for Blu-ray optical disc media, which did not perform well under test conditions. Most of the discs tested ranked at the lower end of the optical disc stability scale. At this time, Blu-ray optical media is not recommended for long-term storage.

Collaborative Research on Antioxidants and Its Impact on Treatment Decisions for the 1763 Altona Haggadah

The Altona Haggadah is a rare and unique manuscript created in Altona, Germany, in 1763. It is part of the [Library and Archives Canada's](#) (LAC's) Jacob M. Lowy Collection, Canada's national treasure of old and rare Hebraica and Judaica. The Altona Haggadah is an illuminated manuscript handwritten in iron gall ink with numerous drawings that contain copper-based pigments. These inks and pigments are corrosive and have deteriorated the paper, requiring deacidification of the manuscript in 1986 to slow the corrosion. While deacidification was necessary, it was not completely sufficient to protect the pages. Additional treatment was required in order to delay further oxidative damage.



A collaborative research project was carried out between LAC and CCI to verify the effectiveness of two promising antioxidants to delay the deterioration caused by the ink and pigments. As part of this project led by Season Tse, Senior Conservation Scientist, ink and pigment paper samples containing atacamite and verdigris similar to the ink and pigments of the Haggadah were prepared and treated with the antioxidants, deacidified and artificially aged. The physical and chemical properties of the samples were then compared. The results did not show conclusively that the two antioxidants would greatly benefit the Haggadah pages. Weighing the risks and cost associated with the antioxidant treatment against the benefits, conservators at LAC chose not to proceed with the antioxidant treatment at this time. Instead, the damaged areas of the manuscript were repaired and strengthened locally. Interleaving pages, impregnated with one of the tested antioxidants and a deacidification agent, were added to the manuscript during rebinding to delay migration of corrosive compounds.

▲ A page from the 1763 Altona Haggadah. (Jacob M. Lowy Judaica Collection, Library and Archives Canada, Acc.# LOWY MS A229)



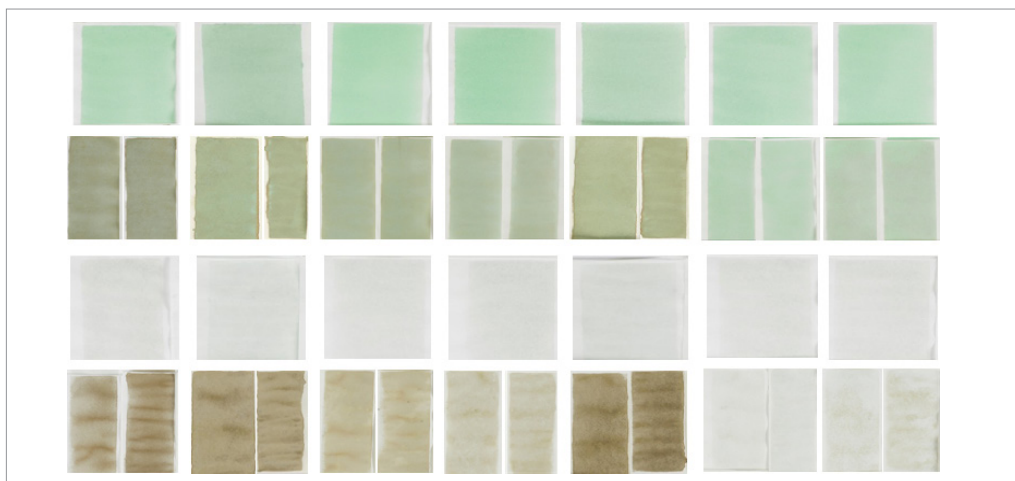
KUDOS CORNER

We are extremely grateful to CCI for supporting our request to have [a senior conservation scientist] present her work on metal corrosion, metal identification and preservation strategies for metal collections. The lectures, handouts, discussions, demonstrations and the experiments were well organized, clear, and easy to understand and follow. [...] It was a pleasure to “test drive” a few of [the senior conservation scientist's] experiments. We feel very fortunate to have this small window in on the important research and testing that CCI does.

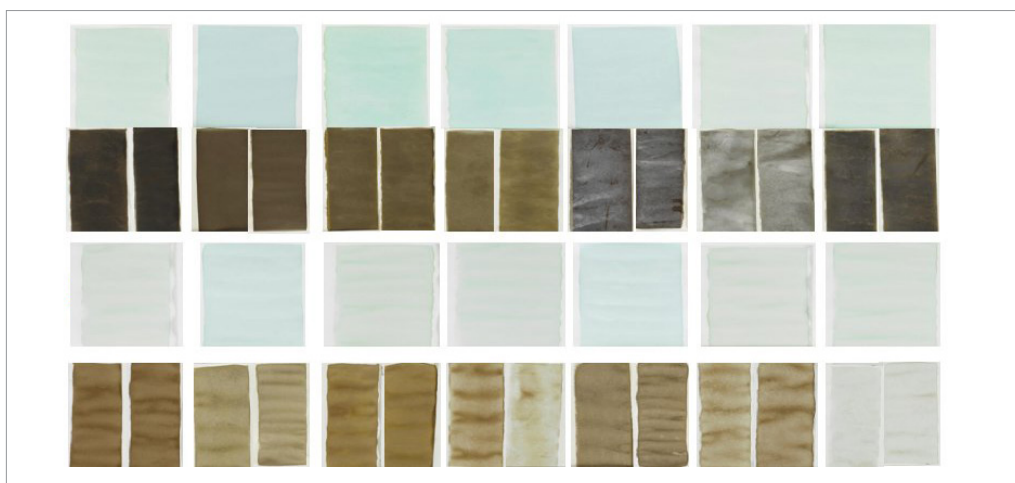
*College of Applied Arts
and Technology, Ontario*

This project provided conservators with details to make informed treatment decisions for this important Jewish prayer book. The results are also useful for treatment consideration of other illuminated manuscripts containing similar types of ink and pigments.

The work of Season Tse and her LAC collaborators was published in the article “[Treatment Considerations for the Haggadah Prayer Book: Evaluation of Two Antioxidants for Treatment of Copper Containing Inks and Colourants](#)” as presented at the American Institute for Conservation's Book and Paper Specialty Group, 2012 AIC Annual Conference, Albuquerque, New Mexico, USA. It was also presented as “An Antioxidant Research Project Resulting From Treatment Needs of an 18th Century Illuminated Manuscript” at the Care and Conservation of Manuscripts Conference, Copenhagen, Denmark.



▲ Test pigment samples of atacamite after antioxidant treatment and after heat aging.



▲ Test pigment samples of verdigris after antioxidant treatment and after heat aging. CCI 101119-0016

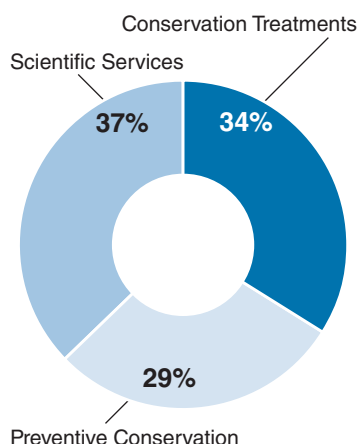


EXPERT SERVICES

Performance in 2012–2013

ACTIVITIES – OUTPUTS

CCI staff completed 239 service transactions for clients, including scientific analyses, conservation treatments, and collection and facility assessments. In total, 478 collections and/or objects belonging to 146 Canadian institutions across Canada were better preserved through these services.



PERFORMANCE INDICATORS

INDICATOR	RESULTS IN 2012–2013
CCI expert services are used by heritage institutions to preserve their collections	<ul style="list-style-type: none"> • 239 expert services were used for collections and objects preservation
Heritage institutions use CCI expert services to preserve their collections	<ul style="list-style-type: none"> • 146 institutions received 239 expert services to preserve collections and objects
Heritage collections and objects whose preservation is supported by CCI expert services	<ul style="list-style-type: none"> • 478 collections and/or objects benefited from expert services <ul style="list-style-type: none"> » 19 collections were assessed and/or analyzed » 57 heritage facilities were evaluated » 181 objects were assessed and/or analyzed » 221 objects were treated

EXPERT SERVICES HIGHLIGHTS

Conservation and Treatment Services

Colour of the Sunbury Militia

The colour of the Sunbury Militia is a large silk flag from the War of 1812 with a Union Jack in the upper left corner and a painted emblem in the centre. When the flag arrived at CCI for treatment, approximately one third of it was missing and the rest was splitting into fragments. Extremely thin and fragile, the flag was in such poor condition that it could not be studied or displayed.

CCI treatment, carried out by Christine Paulocik, Textile Conservator, focused on physical stabilization. Working on its reverse side, an ultrasonic mister was used to humidify small areas at a time. This allowed the numerous splits and displaced fragments to be aligned before they were secured in position with tiny “band aids” of tissue coated with a dried adhesive that was reactivated with solvent. The ground fabric was then lined onto a sheer fabric using heat to reactivate the adhesive coating. The stabilized flag was then placed onto a padded, fabric-covered panel. Visual compensation for missing areas was achieved using custom-dyed fabrics stitched to the panel. The

flag was secured to the panel by stitching around the perimeter and along the major seam lines. The colour of the Sunbury Militia was returned to the New Brunswick Museum and can now be displayed for public viewing.



▲ The colour of the Sunbury Militia, before treatment. CCI scientific analysis revealed that the yellow paint contained arsenic.



▲ The colour of the Sunbury Militia, after treatment. A display case custom-made by CCI prevents the glazing from coming into direct contact with the surface of the flag. CCI 73924-0060

Hide Painting Depicting the St. Francis-Xavier Indian Residential School of Calais, Alberta

A hide painting by Francis Campbell depicting the St. Francis-Xavier Indian Residential School of Calais, Alberta, was treated at CCI. The object is owned by the Royal Alberta Museum and is considered by the community as a significant and representative part of Canadian residential schools history.

The painting's double birchbark panel support was severely cracked, split and deformed, making the object unfit for display and posing a risk during handling.

The treatment was carried out by CCI Interns Emily Higginson and Alison Fleming, under the supervision of Carole Dignard, Senior Objects Conservator. The hide painting was unstitched from the birchbark support to allow the two birchbark panels to be treated separately. Previous CCI research in the 1980s revealed that birchbark can be softened using methanol vapours, which impart sufficient flexibility to allow subsequent safe flattening. In this case, however, the methanol-sensitive ink inscriptions added a layer of complexity to the overall treatment. After testing several techniques, a method was devised by which the birchbark panels were slowly exposed to methanol vapours while safely protecting the inked areas by means of a ventilated aeration window secured all around the inscriptions with magnets. Subsequently, both birchbark panels could be flattened safely under weights.

The splits and losses in the birchbark were then repaired with Japanese paper and a paper pulp mixture, and toned to blend in with the original surface. An internal hinged matboard mount was

designed for safe reassembly of the bark panels and for safe hanging of the painting for display. The birchbark and hide painting were then reassembled.

Hide Painting Depicting St. Francis-Xavier Indian Residential School of Calais, Alberta

▼ Before treatment: front view in raking light.



CCI 120526-0002

▼ During treatment: aeration window secured with magnets.



▼ After treatment: birchbark panels and hide painting reassembled.



CCI 120526-0037

Conservation of 397 Artifacts from Old Songhees Reserve, Victoria, British Columbia

CCI Archaeological Conservation Laboratory conservators and interns, led by Tara Grant, Archaeology Conservator, treated a collection of 397 artifacts excavated in British Columbia that document early European contact with First Nations people.

In 1844, the Songhees people built a village along the western shore of the Inner Harbour of Victoria, British Columbia. The village was used for trading with Fort Victoria and was a reserve between 1853 and 1911, referred to as the Old Songhees Reserve. Recent excavations uncovered organic material dating to the time of early contact with Europeans. Artifacts included basketry, ornately carved wooden fish hooks, a bentwood box and a large collection of leather and rubber footwear. Survival of organic materials, such as wood, basketry and leather, are rare except in water-saturated sites where oxygen—and therefore biological activity—is limited. Of the archaeological wet sites excavated in British Columbia, the Old Songhees Reserve site is the only one from the time of early European contact with First Nations people.



KUDOS CORNER

In regards to the communication [...] between [CCI conservation scientist and museum staff], thank you so very much for your willingness to assist the [museum] with our conservation concerns. We carried out the suggested treatments and are extremely pleased with the results.

*Collection Assistant,
Municipal Institution*

Most of the material was conserved with polyethylene glycol (PEG) to replace the water and bulk out the weakened cellular structure, thus preventing the wood and leather cellular structures from shrinking and collapsing during vacuum freeze-drying. Leather and rubber footwear were collected from an iron cistern and were heavily saturated with iron corrosion. CCI Intern Jessica Lafrance conducted an experiment to determine the most effective way to remove this unsightly corrosion. She experimented with different chelating agents, application methods and treatment times. Her results were displayed as a poster, “The Treatment of Archaeological Rubber at CCI: Removal of Corrosion Products,” at the 35th Canadian Association for Conservation Annual Conference in Vancouver, while her paper, “[Efficiency and Quality in Batch Treatment: The Conservation of Over a Hundred Leather Shoes and Fragments](#),” was presented at the 11th International Council of Museums – Committee for Conservation Group on Wet Organic Archaeological Materials conference in Greenville, North Carolina, and published in the conference proceedings in 2012. All artifacts from the Old Songhees Reserve site were returned to the Royal British Columbia Museum for curation.

▼ Basketry fragment after conservation.



CCI 91313-0431

▼ Carved wood fish hooks.



CCI 91313-0212

***Charlottetown Revisited* by Jean Paul Lemieux**

Jean Paul Lemieux’s 1964 oil on canvas, *Charlottetown Revisited*, is considered a highlight of the mural collection of the Confederation Centre Art Gallery, Charlottetown, Prince Edward Island. This mural, commissioned by the Confederation Centre of the Arts, was selected in 2005 by Michaëlle Jean, former Governor General of Canada, to hang in the Ballroom at Rideau Hall, where it became an iconic backdrop for the 2006 swearing-in ceremony of the Cabinet of the Prime Minister. The painting also figured prominently in all of the televised investitures of the Order of Canada until it was moved to CCI in 2008 for examination and conservation treatment prior to its return to the Confederation Centre Art Gallery.

Charlottetown Revisited presented a serious challenge because it was mounted on a large framework that did not provide adequate support for the oversize work of art. Partly due to inadequate support, the paint and ground layers were cracked. In order to better understand the mechanisms involved in the deterioration of the paint and ground layers due to incorrect or inadequate support, project leader Helen McKay, Fine Arts Conservator, Paul Marcon, Conservation Engineer, and Alexia Soldano, CCI Intern, undertook a short research project to test the impact of vibration on brittle oil paint layers on large, stretched canvases.

This project was important to CCI not only because of the work's cultural and historical importance and visibility, but also because it contributed to important research knowledge concerning the role of vibration in causing cracks in brittle paintings and to the development of expert treatment skills to help address issues of vibration and structural deterioration in oversize paintings. After the deteriorating paint was treated, a light-weight removable backing was secured behind the painting. This was designed to provide a rigid overall support to the canvas and paint layers to increase the long-term structural stability of the painting.



▲ Helen McKay, Fine Arts Conservator and project leader, consolidates unstable paint from a scaffold bridge that permits the painting to remain in a safe horizontal position. CCI 96111-0081



▲ Conservators prepare the painting for wrapping and crating prior to its return to the Confederation Centre Art Gallery. CCI 96111-0086



▲ After treatment. Raking light from the left shows the now consolidated paint and uniform surface, free of distortion. CCI 96111-0049

Cormier Furniture at the Supreme Court of Canada

Dissociation is one of the primary risks to heritage collections. It results from the natural tendency for ordered systems to fall apart over time. CCI has undertaken several conservation inventories to be used as conservation management tools by federal departments to address the risk of dissociation to collections under their stewardship. As an example, [Public Works and Government Services Canada's \(PWGSC's\) Heritage Conservation Directorate](#) requested CCI's Heritage Interiors experts to develop a collections inventory for the heritage furniture designed and selected by the renowned Montréal architect Ernest Cormier to complete his vision for the Supreme Court building in Ottawa. The collection included original Cormier designed furniture commissioned in the 1940s, as well as other furniture assets that were not part of the original collection. With the alterations, losses, reproductions and replacements that have occurred with these pieces over the past 70 years, this collection survey required expert assessment of condition and identity. John Ward, Preservation Advisor, led this comprehensive project, assisted by an experienced external team.

A detailed electronic inventory database was developed to clearly identify original Cormier furniture. These items could then, for the first time, be distinguished from other items in the Supreme Court of Canada. This classification system will be important as it will allow the core heritage furniture collection to be tracked and stored safely when it may be moved for a planned rehabilitation of the Supreme Court building when it will undergo a major seismic upgrade.



▲ Supreme Court Chamber with original furnishings by Ernest Cormier.

Rehabilitation of the Peace Tower Carillon

CCI was asked to assist [PWGSC's Parliamentary Precinct Branch](#) with the development of a request for proposal for the rehabilitation of the carillon in the Peace Tower on Parliament Hill. The carillon, made up of 53 bells, was commissioned during the construction of the Peace Tower and



KUDOS CORNER

I would like to thank [CCI] for the support you were able to provide as fellow colleagues in the museum and heritage sector, at a time of crisis following the near disaster of the fire. [...] It made a great difference to me during this project to have been able to have had access to your care and expertise through the Canadian Conservation Institute, both over the phone, and through the arrangement of professional on-site support [...].

*Manager,
Provincial Historic site*



KUDOS CORNER

[...] your analysis report on a painting from our collection [...] was of great interest to us and it clearly identified the use of bitumen frequently associated with the formation of severe alligator cracks, which are always disturbing to the appreciation of a painting. You were also able to determine the presence of a spirit varnish in the binder, which was undoubtedly responsible for these cracks. [...] I would like to sincerely thank you for your work that, once again, provided documentation for a piece in our collection and improved our understanding as well as technical knowledge of the work of an artist [...].

*Conservator,
Art Gallery*

was completed in 1927. Its July 1st 1927 inauguration during the 60th anniversary of Confederation was part of the first coast-to-coast live radio broadcast of the Canadian Broadcasting Corporation. The carillon's music was dubbed "the voice of the nation" and was intended to evoke the sound of carillons on the war-torn battlefields of the Great War in Belgium. The Right Honourable William Lyon Mackenzie King, Canada's 10th Prime Minister, played an important role in its commissioning. One of only eleven carillons in Canada, it functions to this day through an active program of concerts by the current Dominion Carillonneur, Andrea McCrady.



▲ Small- to medium-sized bells (shown suspended in the upper bell cage of the Peace Tower Carillon), designed, cast and tuned between 1925 and 1927 by Gillett and Johnston (a UK company specializing in carillons).

The carillon is not in tune and modifications during past renovations had a detrimental impact on the instrument. Taking on a design management role in evaluating the restoration needs of the carillon, CCI organized a site assessment of the mechanism and its condition by the carillon's original manufacturer, Gillett and Johnson of the United Kingdom. This investigation, led by John Ward, Preservation Advisor, provided a condition assessment of the instrument as a heritage artifact. This approach will be incorporated into future maintenance and rehabilitation efforts to preserve this unique and largely intact instrument, to address deterioration and to retune the instrument, thereby recovering its authentic voice and balancing its needs as a heritage object with its day-to-day performance demands.

Scientific Services

Analysis of Coatings on Prayer Beads in the Thomson Collection

The Thomson Collection of the Art Gallery of Ontario (AGO) holds 10 exquisitely carved prayer beads that form part of the largest collection of devotional miniature carvings in the world. The boxwood carvings, which only measure a few centimeters in diameter, date from the early 16th century and are Northern European in origin. The beads, which were used as the terminal bead in a rosary, open to reveal intricately carved interiors.

A multi-disciplinary study initiated by the AGO to investigate how the prayer beads were constructed and carved included examination of the beads by x-radiography and micro-computed tomography at partner institutions. Elizabeth Moffatt and Jennifer Poulin, Senior Conservation Scientists, contributed to the study by analyzing coatings, polychromy and adhesives in order to document original materials, as well as those applied during previous treatments. Twenty-eight minute samples from seven prayer beads were analyzed using a combination of instrumental techniques. Materials identified included shellac and beeswax coatings, red iron oxide, red lead and vermilion pigments.

Results were provided to the AGO for inclusion in the presentation "Prayer Beads in the Thomson Collection: Materials, Construction and Provenance," given by Alexandra Suda and Lisa Ellis at the colloquium *Prayer Nuts, Private Devotion and Early Modern Art Collection*, which was held at

the Abegg-Stiftung in Riggisberg, Switzerland, on September 20 and 21, 2012. A comprehensive written paper on the subject is planned at the conclusion of the project.

- ▼ Prayer bead: Last Judgement, and the Coronation of the Virgin, c. 1500–1530, boxwood from The Thomson Collection, Art Gallery of Ontario, shown in the closed position (left) and the opened position (right).



The Thomson Collection © Art Gallery of Ontario, AGOID 29365



The Thomson Collection © Art Gallery of Ontario AGOID 29365

Examination of Aboriginal Treaties

The [Library and Archives Canada](#) (LAC) houses an important collection of Aboriginal treaties on paper, primarily from the 19th century, which contain iron gall ink. They were laminated over 30 years ago. On a selection of the treaties, the lamination has been removed, in most cases mechanically. Kate Helwig, Scott Williams and Elizabeth Moffatt, Senior Conservation Scientists, examined 16 of the delaminated treaties on-site at LAC using non-invasive infrared spectroscopy. Several microscopic samples were subsequently analyzed in the laboratory.

CCI scientists found that the adhesive used to laminate the treaties was cellulose acetate with a diethyl phthalate plasticizer. As cellulose acetate lamination film degrades, it produces acetic acid, which can damage the paper of the laminated document. Analysis of the paper after mechanical delamination showed that the majority of the adhesive remained on the laminating tissue and not on the document surface. This information will assist the conservators at LAC in developing treatment protocols for the treaties.

In-situ lightfastness testing of another Aboriginal treaty in the collection was undertaken by Season Tse, Senior Conservation Scientist. The document included several different colours of ink, a red wax seal and a green ribbon. Using a microfade tester, the treaty was found to have some highly sensitive elements, including the green ribbon, the light brown inks and some of the blue inks. The results of the lightfastness testing are essential for the development of an exhibition lighting policy for loans of the treaty.

Dye Analysis of Ancient Peruvian Textiles

In preparation for an exhibition featuring pre-Columbian works of art entitled *Peru: Kingdoms of the Sun and the Moon*, the Montreal Museum of Fine Arts sent five Peruvian textiles to the Centre de conservation du Québec (CCQ) for treatment. The textiles ranged from approximately 600–2500 years of age and included two fringed ponchos, two burial capes and a funeral mantle.

Fine textiles were a source of prestige and wealth in ancient Peruvian societies. Many of these textiles are thousands of years old, yet remarkably well-preserved due to the environmental conditions of the coastal desert burial grounds in which they were found. The burial textiles that were analyzed for the exhibition are extremely valuable, representing some of the oldest and best-preserved textiles in the world today and are an important part of the museum's collection.

During their treatment, threads from these ancient treasures were sampled and sent to CCI for dye analysis by Jennifer Poulin, Senior Conservation Scientist. The analysis was performed using a novel gas chromatography-mass spectrometric method developed at CCI specifically for the analysis of dyes on textiles. Identified dyes were found to originate from both plant and animal sources and include indigo, *Relbunium* sp., marigold, lupin, sumac, tara, chilca, cochineal and mollusc.

Results were provided to CCQ and the Montreal Museum of Fine Arts for inclusion in the learning material supporting the exhibition. The results were also presented in the lecture "Textiles du Pérou ancien : Conservation, restauration et identité culturelle," given by CCQ conservators Louise Lalonger and France-Éliane Dumais to a public audience at the museum on May 28, 2013.

- ▼ A burial cloak (full cloak left; detail right), showing vivid colours and intricate pattern details. This cloak is 2300–2500 years old and belongs to the Paracas culture. The Paracas people lived on the south Pacific coast of what is now Peru and were one of the earliest known complex societies in South America. This burial cloak is an example of sacred clothing, meant to accompany the wearer in the afterlife. CCI's chromatography-mass spectrometric analysis was able to confirm the presence of South American dye materials, some previously reported, and also a few that until now had not been precisely identified. Dyes identified on the cloak include indigo (*Indigofera* spp.), *Relbunium* spp., chilca (*Baccharis* spp.), and Tyrian purple (*Muricidae* family, mollusc).



© Jacques Beardsell, Centre de conservation du Québec



© Jacques Beardsell,
Centre de conservation du Québec



Preventive Conservation

Risk Assessment of the Saskatchewan Archives Board (SAB)

SAB preserves and provides access to government and private records that are of significance to the history of the Province of Saskatchewan. As part of a long-term preservation strategy, SAB worked with CCI to undertake a comprehensive risk assessment of their facilities to prioritize aspects of the collection's preservation that most require attention.

Through a site visit and the subsequent risk assessment, led by Irene Karsten, Preservation Development Advisor, the risks affecting the millions of records held by SAB in three facilities in Regina, Saskatchewan, were identified, analyzed and evaluated. Priority risks that were identified included the deterioration of acidic paper, acetate film, photographic negatives, colour photographs and magnetic media stored at room temperature, as well as fire. Options to reduce the risks were also analyzed, including the construction of a new storage facility and the digitization of records, and their cost effectiveness was assessed. The results of this risk assessment will assist SAB management in developing collection preservation projects for the next few decades.

This was the first time CCI conducted a comprehensive risk assessment of an archive, and the results will be integrated into CCI's risk database. This will enhance CCI's expertise and knowledge in the field of risk assessment and management, which will then be shared through the Institute's work with other archival facilities clients.



▲ Saskatchewan Archives Board storage facility.

Royal Ontario Museum (ROM) Relative Humidity (RH) Control Module Project

CCI worked with the ROM to provide technical support to develop RH control modules for display cases. Controlling RH in display cases is important not only to ensure the appropriate environmental conditions for objects on display but also to reduce the cost of maintaining these conditions in a larger museum space. Paul Marcon, Conservation Engineer, provided an original design for the module. After ROM personnel built the first units, Paul Marcon re-designed the controller system to simplify construction, and he wrote new software to control the unit's operation. The improved control system was installed at CCI into one of the ROM's units and it was then returned to the ROM, along with documentation to guide the fabrication of additional units.



KUDOS CORNER

Thank you so much for the [museum] Risk Assessment final report which is the outcome of [a senior conservation scientist's] innovative risk assessment measurement template and your thoroughness in identifying, compiling and analyzing data. We are honoured to have worked with such professionals and that [the museum] was selected to be part of the CCI pilot project.

*Head of Administration,
Local Museum*

Conservator Fly-in Program—Inuit Heritage Trust (IHT)

In 2012–2013, CCI visited two Aboriginal cultural centres in Nunavut as part of IHT’s “Fly-in Conservator Project.” Initiated in 2011–2012, after working with communities in the Kitikmeot, Kivalliq and Baffin regions, the IHT put in place the Fly-in Conservator Project to assist staff and heritage professionals in addressing collections preservation issues in their facilities in Nunavut where there is currently no trained conservator.

In partnership with Inuit communities, IHT organizes site visits by conservators (CCI and private sector) to all public collections. In October 2012, Simon Lambert, Preservation Development Advisor, visited two centres at IHT’s request. At the Angmarlik Visitor Centre in Pangnirtung, the main challenges identified were:

- » tackling a collections documentation backlog with limited staff resources;
- » ensuring the preservation of oral history recordings on audio cassettes and VHS; and
- » establishing a basic collections management framework.



▲ Angmarlik Visitor Centre in Pangnirtung. CCI 124716-0007



▲ Collection of tools and objects from the West Baffin Eskimo Cooperative. CCI 124716-0032



At the West Baffin Eskimo Co-operative in Cape Dorset, CCI assessed the preservation needs of a collection of 300 objects (mainly tools and small objects) in view of its upcoming transfer to a new facility, the “Cape Dorset Cultural Centre and Print Shop,” scheduled to begin construction in summer 2014. This was also the ideal moment for CCI to review and comment on the functional program and architectural plans for the new centre before they went out to tender.

After all of the cultural centres in Nunavut have been assessed, IHT plans to release a report on the state of collections in order to help set training goals in conservation, to establish the need for specialized materials and to advocate for increased capacity in delivering collections care across the territory.

Integrated Pest Management (IPM) for the Smithsonian Institution

The National Museum of Natural History (NMNH), one of the museums managed by the Smithsonian Institution, requested the assistance of Tom Strang, Senior Conservation Scientist, in the creation of its current IPM guidelines. The project consisted of three components:

- » a public lecture open to NMNH staff to communicate recent work by CCI on IPM
- » a walk-through to assess IPM requirements in two facilities, the downtown museum and the Museum Support Center storage-laboratory complex, as well as discussions with staff at both facilities
- » revision of NMNH's IPM guidelines after meeting with the current IPM committee, who will be responsible for implementation

An IPM guideline helps institutions develop policies and procedures to lower operational risk through infiltration, conveyance, dispersion and aggregation of collection-destroying pests in the buildings, as well as to mitigate risks introduced by pest infestation of objects and by pest treatments. IPM guidelines are tailored to the organization's operations, scale, vulnerability of collections, use patterns, and staffing to make an effective contribution to the reduction and elimination of collection-damaging pests.

The NMNH has been an early proponent of IPM data collection through its use of traps and visual inspection methods, controlled-atmosphere fumigation and low temperature insect control in objects. The IPM guideline is another piece of an overall IPM plan for the protection of the valuable and irreplaceable objects of scientific and other cultural value that museums hold in the public trust. CCI's involvement in the development of the Smithsonian Institution's IPM guidelines was important for two main reasons: it enabled the NMNH to benefit from CCI's expertise to develop its IPM plan, and it provided an opportunity for CCI to enhance its practical knowledge in the field—knowledge that will be shared more broadly with the heritage community.



SHARING CCI'S KNOWLEDGE — PROFESSIONAL DEVELOPMENT PROGRAMS

Performance in 2012–2013

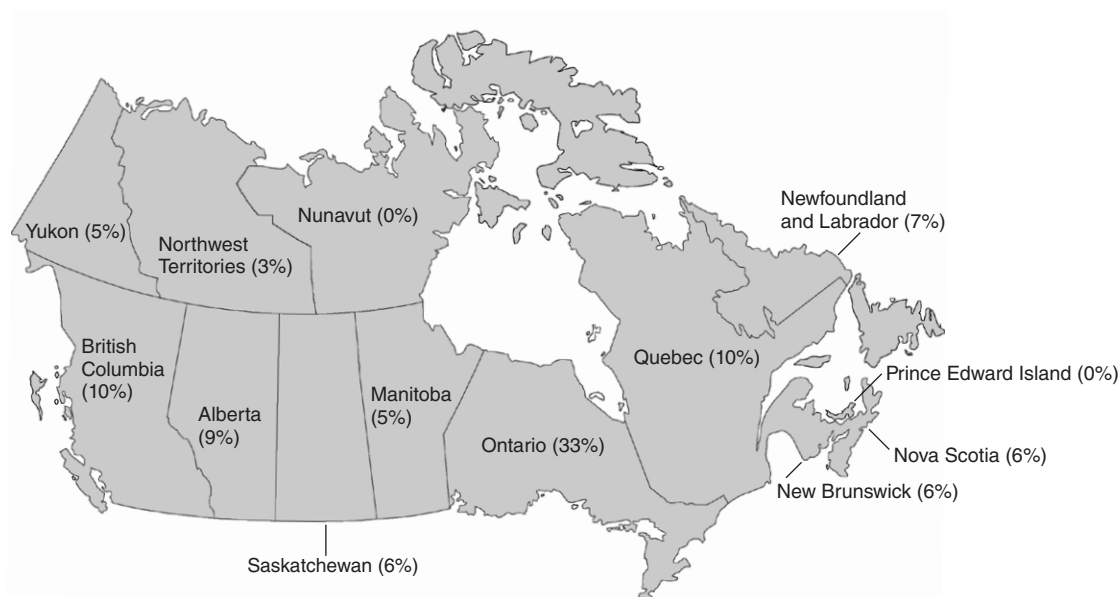
ACTIVITIES – OUTPUTS

CCI conducted 35 professional development events in Canada. CCI knowledge was also shared through 30 lectures and papers presented by CCI's experts invited to Canadian and international partners' events. There were almost 3,200 participants (nearly 1,200 from Canada and more than 2,000 from other countries) in professional development events organized or presented by CCI, including internships, lectures and conferences.

Regional workshops in Canada: 443 Canadian and 1 foreign participants learned about care of collections on display, in storage and in transit at 23 hands-on regional workshops delivered in 9 provinces and 2 territories. The most popular workshop was *Emergency Preparedness* (offered 4 times to 111 participants), and the following 5 workshops were each offered twice:

- » *Exhibition Lighting* (24 participants)
- » *Packing and Shipping of Cultural Property* (31 participants)
- » *Mount-making* (64 participants)
- » *Care of Photographic Materials* (39 participants)
- » *Products Used for Display, Storage and Transportation* (33 participants)

PERCENTAGE OF CCI WORKSHOP PARTICIPANTS FROM EACH PROVINCE OR TERRITORY





KUDOS CORNER

It was incredibly valuable for the participants to be able to access the laboratory areas of CCI and see first-hand what fascinating and important work is going on. The examples and demonstrations provided by [the conservation scientist team] added immensely to the experience of the participants. [...] Many thanks for your continued support [...] by opening your facilities so generously [...].

*Executive Director,
Provincial Museum Association*

Advanced Professional Development Workshop: Conservators and other museum professionals (24 Canadians and 1 foreign) attended the Advanced Professional Development Workshop entitled *Extraordinary Ubiquity: Examination of Photographic Print Materials*.

Internships: CCI offered internships to 23 conservation students or young professionals to improve their theoretical and practical knowledge of conservation:

» 6 Canadians participated in CCI's paid internships

- 3 in Archaeology Lab
- 1 in Objects Lab
- 1 in Fine Arts Lab
- 1 in Conservation Science

» 17 interns benefited from curriculum internships

- 6 in Conservation Science
- 3 in Paper Lab
- 2 in Fine Arts Lab
- 2 in Archaeology Lab
- 2 in Objects Lab
- 1 in Furniture Lab
- 1 in Preservation Services

Among the 17 curriculum interns that CCI accepted, 10 were Canadian and 7 were foreign.

PERFORMANCE INDICATORS

INDICATOR	RESULTS IN 2012–2013
Heritage institutions and heritage workers improved their professional knowledge, skills and practices	<ul style="list-style-type: none"> • 83% of participants answered the training evaluation survey <ul style="list-style-type: none"> » 100% of them reported improvement » 71% reported significant and very significant knowledge improvement » 48% reported significant and very significant practice improvement » 60% reported significant and very significant skills improvement
Canadian and international heritage institutions and workers used CCI learning programs and materials (i.e. took part in CCI learning opportunities)	<ul style="list-style-type: none"> • 277 heritage institutions benefited from CCI learning programs <ul style="list-style-type: none"> » 244 Canadian institutions » 33 foreign institutions • 492 individuals participated in CCI professional development programs <ul style="list-style-type: none"> » 483 from Canada » 9 from other countries • More than 2,650 individuals attended CCI lectures or papers presented at conferences and other events <ul style="list-style-type: none"> » approximately 700 from Canada » more than 2,000 from other countries



PROFESSIONAL DEVELOPMENT HIGHLIGHTS

Advanced Professional Development Workshop, *Extraordinary Ubiquity: Examination of Photographic Print Materials*

Photographic prints document virtually all aspects of our lives and were produced in the tens of millions in the 19th century and in the hundreds of millions from the 20th century onwards. Many different photographic processes have been developed since the early 19th century. During the first 150 years, the majority were based upon the light sensitivity of metallic salts, predominantly silver halides. In the latter part of the 20th century, digital-based imaging technologies emerged and began competing with conventional photographs. Digital imaging now dominates the market. But in spite of this extraordinary ubiquity of both conventional and digital photographic prints, their chemistry, technology and long-term preservation requirements are not always fully understood by those charged with the responsibility for their care and conservation.

Greg Hill, Senior Paper Conservator, worked with Ryan Boatright, an internationally recognized contemporary artist/photographer and former research scientist, to deliver this four-day workshop entitled *Extraordinary Ubiquity: Examination of Photographic Print Materials*. Participants learned the many different types of conventional and digital printing processes used throughout the history of photography through formal presentations, hands-on print viewings and web-based tools. The instructors explored topics such as process identification techniques, mechanisms of deterioration, and factors that come into play when making decisions on storage and handling. Intended to maximize the capacity of those responsible for the long-term preservation of photograph collections to make informed decisions, 25 archivists, curators, collection managers and conservators from Canada and England attended this CCI Advanced Professional Development Workshop.



▲ Ryan Boatright, contemporary artist/photographer and former research scientist, delivering his lecture on photographic print identification. CCI 123764-0005



▲ Participants during the Advanced Professional Development Workshop, *Extraordinary Ubiquity: Examination of Photographic Print Materials*. CCI 123764-0007



KUDOS CORNER

You've confirmed things that I've been doing right and you've taught me new things and made me re-think some of our current practices. This workshop has far exceeded all my expectations.

*Participant,
Advanced Professional
Development Workshop*



SHARING CCI'S KNOWLEDGE — PUBLISHING AND ONLINE RESOURCES

Performance in 2012–2013

ACTIVITIES – OUTPUTS

Training materials: Every workshop includes valuable training materials for participants. In 2012–2013, more than 470 Canadian participants and hosts received training materials, which they could keep for future reference to enable them to care for their objects and collections.

Print Publications: More than 1,340 CCI scientific and technical print publications were distributed in Canada (71%) and abroad (29%), including the sale of 864 CCI publications. The three most popular publications sold were:

1. *Lighting Methods for Photographing Museum Objects*
2. *Technical Bulletin 30, The Digitization of Audio Tapes*
3. *Metals and Corrosion: A Handbook for the Conservation Professional*

Online Resources: There were 190,460 unique visitors to CCI's website who visited a total of 799,519 pages. More than 110,500 of these visitors consulted learning material documents designed for the heritage community.

Online resources represented 1,826 web pages and these pages were consulted 419,127 times. The most consulted online resources were [Caring for](#) web pages (211,149 unique page views) and CCI Notes (162,902 unique page views).

Top Three Online Resources:

1. *Light, Ultraviolet and Infrared* (consulted 18,629 times)
2. *Physical Forces* (consulted 9,055 times)
3. *Light Damage Calculator* (consulted 5,750 times)

Top Three CCI Notes:

1. *Care of Ivory, Bone, Horn, and Antler – CCI Notes 6/1* (consulted 2,688 times)
2. *Care of Objects Made from Rubber and Plastic – CCI Notes 15/1* (consulted 2,557 times)
3. *Silver – Care and Tarnish Removal – CCI Notes 9/7* (consulted 2,529 times)

Library Services: In addition to supporting the research and library requirements of CCI staff (the library's primary clients), CCI's library handled 293 requests for service from external clients:

- » 165 books were loaned
- » 100 articles were distributed
- » 28 reference questions were answered



KUDOS CORNER

I am an avid fan of all things CCI – I do read the website, use your on-line resources, and try to take courses when I can too!

*Collections Manager,
Local Museum, Alberta*



PERFORMANCE INDICATORS

INDICATOR	RESULTS IN 2012–2013
Canadian and international heritage institutions and workers used CCI's learning materials	<ul style="list-style-type: none"> • 1,816 printed learning materials were distributed • 190,460 unique visitors consulted 1,826 online learning materials

PUBLISHING AND ONLINE RESOURCES HIGHLIGHTS

Technical Bulletin 30, *The Digitization of Audio Tapes*

CCI released Technical Bulletin (TB) 30, *The Digitization of Audio Tapes*. Written by Richard Hess, expert in the digitization of audio tapes, Joe Iraci, Senior Conservation Scientist, and Kimberley Flak, Conservation Scientist, TB 30 is a new resource to help archives and heritage institutions address the challenges around preserving culturally significant information contained on audio tapes. Since these analog audio storage formats have a finite technology lifetime, the recorded cultural information they contain must be migrated to new technology to remain accessible. *The Digitization of Audio Tapes* is a TB that provides information and procedures for digitizing cassettes and reel-to-reel tapes. It is intended to assist small to mid-size heritage institutions that lack the funds for professional digitization.

Light Damage Calculator

In August 2012, CCI was proud to launch the Light Damage Calculator on its website. As a practical result of CCI's Research and Development program, the calculator allows users to test various scenarios to estimate how colours could fade when exposed to light, and to predict the influence of exhibition lighting on the future appearance of objects and collections.

External Publications

The 13 CCI scientists and conservators as identified in bold below wrote or contributed to 12 articles in professional journals in science and conservation, and 1 book (thesis) was published.

Cook, Clifford, Jessica Lafrance and Carmen Li. "Preliminary Assessment of a New PEG." In K. Straetkevern and E. Williams, eds., *Proceedings of the 11th ICOM-CC Group on Wet Organic Archaeological Materials Conference, Greenville, 2010*. USA: ICOM-CC Working Group on Wet Organic Archaeological Materials, 2012, pp. 245–255.

Couture-Rigert, Doris E., **P. Jane Sirois** and **Elizabeth A. Moffatt**. "An Investigation Into the Cause of Corrosion on Indoor Bronze Sculpture." *Studies in Conservation* 57, 3 (2012), pp. 142–163.

Druzik, Jim, and **Stefan Michalski**. "The Lighting of Easel Paintings." In J.H. Stoner and R.A. Rushfield, eds., *Conservation of Easel Paintings: Principles and Practice*. New York, NY: Routledge, 2012, pp. 678–692.

Grant, Tara. "Conservation of Thule Skin Clothing From Sannirajaq Site, Nunavut." In K. Straetkevern and E. Williams, eds., *Proceedings of the 11th ICOM-CC Group on Wet Organic Archaeological Materials Conference: Greenville, 2010*. USA: ICOM-CC Working Group on Wet Organic Archaeological Materials, 2012, pp. 623–632.



KUDOS CORNER

I expect I will use the [Light Damage] Calculator to demonstrate to people what will or will not happen due to light exposure rather than having them rely on what I say.

*Textile Conservator,
Public Museum, United Kingdom*



KUDOS CORNER

I just tried the [Light Damage] Calculator with some textiles in which I know the dyes used and the information gained from the results is very informative and could be a useful tool for discussion with curators and exhibition designers. Definitely worth putting it on the next Newsletter.

*Participant,
Webinar for Heritage
Preservation Session*



Guild, Sherry, Season Tse and Maria Trojan-Bedynski. "Technical Note on Treatment Options for Iron Gall Ink on Paper With a Focus on Calcium Phytate." *Journal of the Canadian Association for Conservation* 37 (2012), pp. 17–21.

Guild, Sherry, Christine McNair, Lynn Curry, Geneviève Samson and Judy Dietz. "The Salzinnes Antiphonal: The History and Examination of a Sixteenth-century Slavonic Manuscript." In M.J. Driscoll, ed., *Care and Conservation of Manuscripts 13, Proceedings of the 13th International Seminar Held at the University of Copenhagen 13th-15th April 2011*. Copenhagen, Denmark: Museum Tusculanum Press, 2012, pp. 167–183.

Helwig, Kate, Marie-Eve Thibeault and **Jennifer Poulin**. "Jack Chambers' Mixed Media Paintings From the 1960s and 1970s: Painting Technique and Condition." *Studies in Conservation* 58,3 (2013), pp. 226–244.

Lafrance, Jessica. "Efficiency and Quality in a Batch Treatment: The Conservation of Over a Hundred Leather Shoes and Fragments." In K. Straetkvern and E. Williams, eds., *Proceedings of the 11th ICOM-CC Group on Wet Organic Archaeological Materials Conference: Greenville, 2010*. USA: ICOM-CC Working Group on Wet Organic Archaeological Materials, 2012, pp. 611–621.

Lambert, Simon. "The Crisis in Storage: An Old Tale...With a New Ending?" *International Preservation News* 57 (August 2012), pp. 14–17.

Shugar, Aaron N., and **P. Jane Sirois**. "Handheld XRF Use in the Identification of Heavy Metal Pesticides in Ethnographic Collections." In A.N. Shugar and J.L. Mass, eds., *Handheld XRF for Art and Archaeology*. Studies in Archaeological Sciences 3. Leuven, Belgium: Leuven University Press, 2012, pp. 313–348.

Strang, Tom. [*Studies in Pest Control for Cultural Property*](#). Doctoral Thesis. Gothenburg Studies in Conservation 30. Gothenburg, Sweden: University of Gothenburg, 2012.

Tse, Season, Sherry Guild and Amanda Gould. "A Comparison of Aqueous Versus Ethanol Modified Calcium Phytate Solutions for the Treatment of Iron-Gall Ink Inscribed Paper." *Journal of the Canadian Association for Conservation* 37 (2012), pp. 3–16.

Tse, Season, Maria Trojan-Bedynski and Doris St. Jacques. "Treatment Considerations for the Haggadah Prayer Book: Evaluation of Two Antioxidants for Treatment of Copper-Containing Inks and Colorants." *The Book and Paper Group Annual, American Institute for Conservation* 31 (2012), pp. 87–97.



CORPORATE INITIATIVES

CONSULTATIONS WITH CLIENTS AND PARTNERS

As part of CCI's commitment to develop and implement a strategic plan for the next five years, it conducted extensive consultations with clients and partners in 2012–2013. The objective was to identify the major challenges and needs of the Canadian heritage community around the preservation of, and safe access to, their objects and collections. Almost 130 decision makers and heritage professionals from across all regions in Canada participated in these consultations, including 58 managers and curators who were invited to participate in seven different focus groups, and 69 heritage professionals shared their concerns through telephone interviews.

FACEBOOK

CCI launched Facebook pages in [English](#) and [French](#) in September 2012. The initiative was well received, with more than 1,000 “likes” between both pages within nine months of the launch.

Although CCI's strong web presence is recognized in both the Canadian and international heritage communities, it is primarily a one-way communication vehicle. Establishing a Facebook presence allows CCI to extend its reach and to benefit from Web 2.0 technologies. This first foray into social media provides an opportunity for CCI to explore a two-way engagement with users, to generate a discussion with them and to encourage their involvement and feedback.

MEDIA AND PUBLIC RELATIONS

In 2012–2013, local and national media shone the spotlight on several CCI treatments of significant and interesting objects and artifacts. Among the features, the Toronto Star covered CCI's work on a 1927 mosaic created by the American muralist Barry Faulkner in the Wellington Building located within the Parliamentary Precinct, and also reported on CCI's work at Queen's Park in Toronto that revealed an allegorical ceiling mural painted in the 1890s by German-born artist Gustav Hahn.

Media interest and significant coverage occurred during the painstaking conservation of the mural in the office of the Leader of the Opposition (in the Centre Block of Parliament Hill), which included one portion that depicts a medieval, armoured knight wielding a sword. Conservation efforts revealed the “body” of a dead knight in the background of this portion, hidden for more than 70 years, obscured by overpaint and salts leaching from the plaster into the paint.

CBC highlighted the New Brunswick Museum's conservation treatment of Miller Brittain's large chalk sketches. Claire Titus, New Brunswick Museum's conservator in charge of the project, developed the treatment over the course of six weeks at CCI. During that time, CCI experts worked with her to develop a treatment approach, which included investigating the drawings and creating a protocol for repairing the paper of Brittain's sketches.

Local media covered the return of significant objects treated by CCI to their respective museums and communities. For example, the return of Jean Paul Lemieux's painting to Charlottetown, Prince Edward Island ([see page 11 of the Annual Review](#)), and the return of the Maliseet Cap to Fredericton, New Brunswick ([see 2011–2012 Annual Review, page 10](#)), were both featured.



KUDOS CORNER

My family and I took the opportunity to visit the Canadian Conservation Institute on Saturday during Doors Open Ottawa and are very happy we did. Your organization impressed us greatly with the wide array of activities you do to preserve Canadian cultural heritage. Your staff exhibited their knowledge and expertise with passion and enthusiasm. We thank you for your effort to open your doors to the public and want you to know how much we value the work that your organization does. We hope that our government continues to support and fund your mandate.

The patience and dedication you show, in the preservation and restoration of our common Heritage is truly remarkable. It impressed the hell out of me. You should all be very proud, even though your work is often unsung and unpraised.

I hope that the public gets to see all your important work and that these treasures go on display.

*Visitor Comments,
Doors Open Ottawa, 2012*

Doors Open Ottawa: On June 2, 2012, CCI participated for the fourth time in *Doors Open Ottawa*. More than 282 visitors came for a behind-the-scenes look at CCI's operations on a rainy Saturday and were fascinated by the variety of objects on display, including the colours of the Third York Militia (War of 1812 flags) from the City of Toronto; two globes, Terrestrial and Celestial from the Bibliothèque du Séminaire de Saint-Hyacinthe; Thule Artifacts from Arctic Canadian sites; and a poster board representing Japanese Canadians in 1928 from the Japanese Canadian National Museum and Archives, Burnaby, British Columbia.



▲ The 200th visitor to CCI during Doors Open Ottawa 2012 is given a commemorative gift.

CCI's 40th Anniversary: On the occasion of its 40th anniversary, CCI prepared a slide show entitled *40 Years, 40 Images* that presented a visual journey through CCI's history of serving clients and preserving Canada's rich heritage since 1972. The slide show was presented several times during the year, including at the Canadian Museums Association Annual Conference.

CCI E-NEWS: 360 new clients registered for CCI e-News. The distribution list now comprises 8,529 clients, of which 47% are from Canada and 53% are from other countries. The number of Canadian subscribers grew by 5%, compared to last year.

CLIENT SERVICES

CCI staff responded by telephone or email to 953 requests for information, of which 754 were for scientific and/or technical advice.

HUMAN RESOURCES

Each year, CCI employees who have made outstanding contributions to the work of the Institute are recognized by management through CCI awards. Sometimes, they are also the recipients of external awards and recognition.

CCI Awards

CCI Technical Achievement Award

Module to Control Relative Humidity (RH) in Display Cases

Paul Marcon, Conservation Engineer, received the CCI Technical Achievement Award for his ongoing work on the CCI RH module, an important tool that museums can use to help protect their collections while reducing energy costs and minimizing the impact on the environment. The RH module has been proven effective as the Museum of Science and Technology has continuously run two units for more than 10 years and, more recently, the Royal Ontario Museum has begun using an improved design developed by CCI to build several of their own modules for controlling RH in display cases in their galleries ([see page 17](#)).



CCI Team Work Award

In 2012–2013, two CCI Team Work Awards were given to staff, highlighting their outstanding work in major projects.

Conservation Treatment of the Colours of the Third Regiment of York Militia

A large multidisciplinary team that worked on the stabilization and conservation of two extremely degraded flags known as the colours of the Third Regiment of York Militia was recognized for its successful conservation treatment ([see Annual Review 2011–2012, page 23](#)). Team leader, Jan Vuori, Senior Textiles Conservator, efficiently organized all of the players and planned the different stages. Several stages were led by Renée Dancause, Textiles Conservator. These two textile conservators assumed joint responsibility for this complex treatment, coordinated work activities and accomplished shared goals with several co-workers and external partners. The project would not have been completed successfully without the help of all staff involved.



▲ From left to right: Jeanne Inch, former Director General and Chief Operating Officer (retired), Jan Vuori, Senior Textiles Conservator, and Renée Dancause, Textiles Conservator. CCI 101363-0090

CCI's Laboratory Ventilation Remediation Project

The Building Services team was recognized for the complicated and essential completion of CCI's Laboratory Ventilation Remediation Project, which resulted in certified and fully functional fume hoods, flexible extraction arms and bench exhausts. The lead on the project, Marc Laplante, Building Systems Technician, was diligent and always respectful with laboratory staff and contractors, ensuring that CCI staff were aware of the work being completed in the labs and that the contractors were careful around the objects and equipment in the labs.

CCI Director General Excellence Award

Debbie Laplante, Manager, Marketing and Client Relations, received the CCI Director General Excellence Award for two major accomplishments: ensuring that CCI met the Treasury Board requirements for web accessibility within very tight deadlines and redesigning the structure and content of the CCI website so that clients have user-friendly access to CCI's knowledge and resources. A committed and dedicated manager, Debbie Laplante maintained a positive attitude and always made time for her staff, as well as for those from other divisions in the Institute. By making the CCI website more accessible and easier to use, she contributed to bringing the wealth of information that CCI provides more directly to the heritage community.

External Awards and Recognition

Gunther H. Leonhardt Memorial Award

Carl Bigras, Senior Scientific Documentation Technologist, received the Gunther H. Leonhardt Memorial Award 2012 from Algonquin College. This award is presented to a graduate of the Algonquin College Photography Program who is involved in the photographic community, has demonstrated leadership qualities and has contributed to the success of students in the Photography Program.



PARTNERSHIPS

Performance in 2012–2013

Centre de conservation du Québec (CCQ) – The Painting Technique of Jean-Baptiste Roy-Audy

For several years, CCQ has been working on the conservation of several paintings by Jean-Baptiste Roy-Audy (1778–1848), all from the collection of the Musée national des beaux-arts du Québec, in preparation for a future exhibition. Roy-Audy, a self-taught artist, painted many portraits of important Quebec citizens as well as religious paintings for a number of churches.

The conservation of the Roy-Audy paintings at CCQ provided an opportunity to study the artist's technique and for CCI to analyze samples in order to document the materials he used. The results of the project will be disseminated in a joint publication. With the date of the museum's Roy-Audy exhibition now set for 2016, CCQ and CCI have increased their efforts to complete the treatment and analysis of the paintings.

International Center for the Study of the Preservation and the Restoration of Cultural Property (ICCROM): Memorandum of Understanding on Risk-based Decision-making

Representatives of CCI, RCE (Cultural Heritage Agency of the Netherlands / *Rijksdienst voor het Cultureel Erfgoed*) and ICCROM met in Ottawa in March 2013 at the conclusion of a 10-year collaborative partnership on *Risk-based Decision-making*. The purpose of the three-day meeting was to evaluate the results of the partnership, identify issues in the methodology that still needed to be addressed, and discuss ways these issues could be addressed within the next three to five years, given the different agendas of the three institutions. The meeting concluded with a consensus on the issues that need to be addressed, and on strategies for integrating the risk-based decision-making approach into the field of built heritage. The individual partners agreed to examine the extent to which these issues and strategies could be integrated into their future plans.



KUDOS CORNER

We are extremely grateful for your ongoing support and your willingness to share your staff, resources and facilities with the training programs. We could not do, what we do, without you.

*Co-ordinator,
Conservation and
Museum Programs,
Educational Institution*

Certainly, the work of the [museum] has benefitted greatly from CCI's services and professional expertise...it is always immensely rewarding to collaborate with you!

*Conservator,
Provincial Museum*



Financial Statement for 2012–2013

REVENUES	
Appropriation	6,527,061
Custody of real property to PCH-CCI	2,308,697
Vote-netted revenue ¹	500,000
Crown asset funds	0
Total – Operating budget	9,335,758
EARNED REVENUES	
Publications and library services	40,618
Conservation and scientific services	345,287
Total – Earned revenues	385,905
Total – Operating budget and earned revenues	9,721,663
EXPENDITURES	
Salaries	6,066,585
Building operations ²	2,043,221
Program operations ³	966,148
Total – Operating costs	3,009,369
Total – Expenditures	9,075,954
Refund – Vote-netted revenue	500,000
Total expenditures and refund of vote-netted revenue	9,575,954
Subtotal	145,709
Crown asset transfer to Fiscal Year 2013–2014⁴	0.00
Total balance	145,709

Note: This is not an audited financial statement.

¹ Vote-netted revenue is a financial mechanism used by the Government of Canada to provide a draw on projected earned revenue.

² Real property operating costs for CCI.

³ Program operations include the following: transportation and communication (telephone, courier, travel including museum and site visits, conference attendance, professional association business, and travel for training and emergency services), information (printing, publishing, advertising), rentals, repairs and maintenance, equipment, material and supplies, and professional services (including contractual work, consulting and advisory contracts).

⁴ Unused funds for crown asset transferred to FY 2013–2014.