



Canadian
Conservation Institute

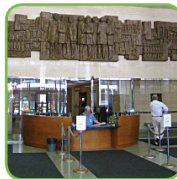
Institut canadien
de conservation

Canada



Annual Review 2010–2011

Canadian Conservation Institute





2010–2011 ANNUAL REVIEW

► Meri Karinen (*Left*) (CCI curriculum intern from Finland) is treating the varnish top coat of a medicine wagon. The wagon is a unique local artifact from the Cumberland Heritage Village Museum, Cumberland, Ontario. It was built by J. Dufourd, a local carriage maker in Ottawa during the late 1800s, and owned by Mr. John D. Ferguson, a pharmacist in Cumberland. Ferguson, son of Dr. James Ferguson, used the wagon from circa 1890 to 1910 to sell Stroud's Tea, Spices, and Cordials, as well as his father's patent medicines.

► Rémi Catillon (*Right*) (CCI curriculum intern from the Institut national du patrimoine, France) is removing a white polish residue from a Japanese cabinet. This complex teak and ivory Asian trade cabinet is from Eldon House, London, Ontario, and was collected by the Harris family on an 8-month-long trip to Japan in 1897.



ANNUAL REVIEW OBJECTIVE:

Through this Annual Review, the Canadian Conservation Institute (CCI) presents results achieved in 2010–2011 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 the heritage community in conserving Canada's heritage collections so they may be accessible to present and future generations.

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

- » **research and development in conservation**, including scientific research, advanced techniques for treatment and restoration, and practical and innovative solutions for caring for collections
- » **equitable provision of expert services** to the heritage community in Canada, including scientific services, conservation treatments, and preservation advisory services that meet the community's needs
- » **dissemination of conservation knowledge**, through training, professional development, online learning materials, and publications, to assist professionals, workers, and volunteers in the heritage community in making informed decisions about care of their collections



Message From Minister

As Minister of Canadian Heritage and Official Languages, I am pleased to present the *2010–2011 Annual Review* of the Canadian Conservation Institute. This review offers a complete overview of all the Institute's achievements and activities and describes how it is responding to the needs of the heritage community all across Canada.

This community—made up of our museums, art galleries, archives, and historic sites—has the mission to protect, restore, display, and transport the treasures of our culture and heritage so that they are accessible to current and future generations. The Institute, which supports the heritage community in this work, is recognized around the world for its technical skill in the science of conservation, in restoration, and in preventive conservation.

I would like to congratulate the Institute and everyone who believes in the importance of promoting our heritage. Your efforts are helping increase our knowledge of Canada, a vast country forged through a history rich in events, acts of bravery, and achievements large and small.

The Honourable James Moore



Director General's Message

The Canadian Conservation Institute's *Annual Review* for fiscal year 2010–2011 not only reports on our accomplishments but also highlights our work on some of Canada's most significant heritage collections and objects. These objects — concrete examples of Canada's history that reflect the country's diverse heritage — include a beaded pouch made by First Nations in the 1940s and 1950s and a painting by one of Canada's most important artists of the 19th century. In addition to the work done for objects and collections, we also contributed to the preservation of heritage interiors, including an historic house with exceptional 2nd Empire architecture built in 1882–1883, and Canada's Parliament Buildings, arguably the country's most significant heritage buildings. We also continued to address some of the present-day challenges facing Canada's heritage institutions: the preservation of digital heritage assets, and the identification and care of plastics in museum collections.

Examining the statistics, you can see that CCI increased the number of expert services provided to clients in Canada (by 60%) as well as the number of workshops delivered in all provinces and territories. The number of clients in Canada and internationally who have registered for our *CCI e-News* continued to grow as did the number of participants in our internship program — with 12 interns participating throughout the year, including 5 who came from France, Austria, and the United States as part of their conservation education programs.

Like most government organizations, including the [Department of Canadian Heritage](#), CCI experienced budget reductions. While these exercises are always challenging, they help us focus on priorities such as protecting our ability to deliver conservation and conservation science expertise and services, basing decisions on becoming more effective and efficient, and improving ways to communicate with and disseminate information and advice to our clients. To support client needs, we also began the review and redesign of our website to ensure tools and learning materials are easily accessible, implemented a new approach to strengthen our client inquiry centre, and increased our capacity to gather and analyse business intelligence on the conservation needs of the heritage community in Canada.

Over the next year, CCI will continue to strengthen our professional development program, designing and implementing new workshops and advanced professional development courses. We will also host an international symposium [Adhesives and Consolidants for Conservation: Research and Applications](#) in the fall (October 17–21, 2011) to disseminate current practical and theoretical knowledge on the application of adhesives and consolidants in heritage conservation and to highlight CCI's leadership role in this area over the past 30 years.

Conscious of the economic situation, we will explore ways to help museum directors, conservators, and other professionals protect their collections, while reducing the energy costs associated with maintaining a museum environment.

Finally, 2012 represents a significant anniversary for CCI (which was created in 1972), as well as the 200th anniversary of the War of 1812. To mark these events, we will have a special edition of our magazine *REFLECTIONS*, and will feature the preservation of War of 1812 artifacts.

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

Jeanne E. Inch
Director General and Chief Operating Officer CCI



RESEARCH AND DEVELOPMENT

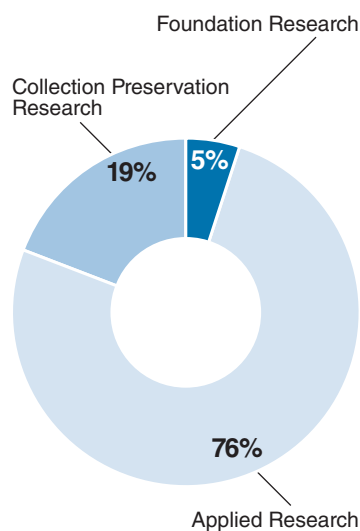
Performance in 2010–2011

ACTIVITIES – OUTPUTS:

Thirty-eight projects were active in Foundation Research, Applied Research, and Collection Preservation Research; 38 partners (27 Canadian and 11 foreign) contributed to CCI research and development projects.

PERFORMANCE INDICATORS:

INDICATOR	RESULTS IN 2010–2011
Canadian and international community has access to the results of CCI research and development activities	<ul style="list-style-type: none">• 17 scientific and technical articles authored by CCI staff were published externally<ul style="list-style-type: none">» 8 articles in Canadian publications» 9 articles in publications outside Canada
	<ul style="list-style-type: none">• 16 scientific and technical presentations were given to professional conservation audiences<ul style="list-style-type: none">» 15 presentations at Canadian conferences / educational institutions» 1 presentation at international conferences / educational institutions



RESEARCH AND DEVELOPMENT HIGHLIGHTS

Characterization of Canadian amber: Canada is rich in amber deposits of varying geological age and type. The purpose of this research project was to characterize amber from sites across Canada. The ability to distinguish amber from various locations will not only aid in understanding the organic geochemistry of the deposits, but will also be helpful in studying early decorative objects produced by First Nations using these materials. The results of this project will help archaeologists learn more about how this material was used and potentially traded by early Aboriginal peoples.

The chemical composition and maturity of the amber samples were determined using Fourier transform infrared (FTIR) spectroscopy, and pyrolysis-gas chromatography-mass spectrometry (Py-GC-MS). CCI scientists Jennifer Poulin and Kate Helwig found three distinct sub-classes in the Canadian amber deposits studied. Additionally, analysis determined that two deposit sites in Nunavut and one site in British Columbia contained a type of amber not described by the existing classification system. This new sub-class of amber is presently unique to Canada, and has been classified as Class Id.

>> KUDOS CORNER

Thank you so much for giving an excellent lecture to my class in the *Chemistry of Art and Archaeology*. It was quite clear that they enjoyed your lecture and, to judge from the questions at the end, you may have changed some of their career ambitions.

University Teacher

I would like to take a moment to thank you for your excellent lecture at the 2011 Canadian Association for Conservation Conference on the new ASHRAE standards. I was relieved to hear the news of the new standard and its implications. (...) All in all, the news of the new standards came as a welcome relief.

*Conservator,
Municipality Archives*

Stability of optical discs and magnetic tapes: Preservation of digital materials has become a critical issue for archives, libraries, and other heritage institutions. This research project aims to determine which optical discs are of good quality and to verify claims made by manufacturers about their products. An important milestone was achieved this year with the completion of the experimental phase on accelerated aging. Experiments on disaster recovery have indicated considerable variability among discs, which may also exist in their longevity. After publishing results on the stability of CDs, CCI scientist Joe Iraci authored an article explaining the results and making recommendations about DVD formats [“The Stability of DVD Optical Disc Formats,” *Restaurator* vol. 32, no. 1 (March 2011), pp. 39–59].



▲ Accelerated aging of this DVD movie disc resulted in the degradation of the reflective metal layer in the inner portion of the disc. The integrity of this layer is critical for the DVD to be readable.



▲ Accelerated aging of this DVD movie disc under conditions of elevated temperature and relative humidity caused deterioration of the metal layer in the form of circular holes.

Light damage calculator: Balancing the protection of heritage objects and works of art from light damage while enabling them to be seen by museum visitors can be a challenge. CCI conservation scientists Stefan Michalski and Eric Hagan have developed a light damage calculator that estimates colourant fading at a given light dose based on the best available data. This calculator will be available on the CCI website sometime during fiscal year 2011–2012. It will allow users to evaluate light deterioration by selecting colourants, exposure levels, and exposure durations of particular interest; faded colours will be presented as patches on the computer screen. The model will provide light-fading calculations in three different scenarios:

- » fading of a single colourant
- » fading of a single colourant compared in different scenarios
- » fading of a collection of coloured objects

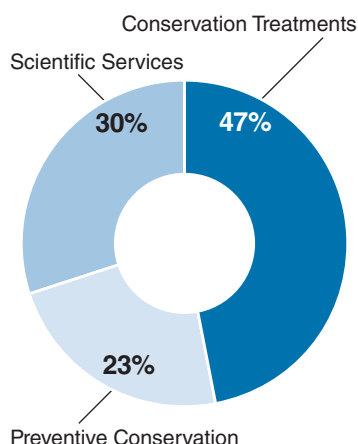


EXPERT SERVICES

Performance in 2010–2011

ACTIVITIES – OUTPUTS:

CCI expert services staff completed 345 transactions for clients, including analyses, treatments, and collection and facility assessments. In total, 302 collections and/or objects belonging to 188 Canadian institutions from across Canada were better preserved through these services.



PERFORMANCE INDICATORS:

INDICATOR	RESULTS IN 2010–2011
CCI expert services are used by heritage institutions to preserve their collections	<ul style="list-style-type: none"> 345 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"> 188 institutions received 345 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"> 302 collections and/or objects benefited from expert services <ul style="list-style-type: none"> » 2 collections were assessed and analysed » 49 heritage facilities were evaluated » 114 artifacts were analysed » 137 artifacts were treated
Overall Client Satisfaction	<ul style="list-style-type: none"> 100%

EXPERT SERVICES HIGHLIGHTS

Conservation and Treatment Services

Beaded pouch: The Maisie Hurley Collection comprises objects gifted to Mrs. Maisie Hurley by Aboriginal leaders in British Columbia and elsewhere, during the 1940s and 1950s, in recognition of her advocacy work for Aboriginal rights in Canada. CCI conservators treated a beaded pouch, one of many objects in the collection, now property of the North Vancouver Museum & Archives (NVMA) in North Vancouver, British Columbia. NVMA presented, in partnership with the Squamish Nation, a major new exhibition (“*Txwnch7á mnew’as kwis eslihiykiwiws* / Entwined Histories: Gifts from the Maisie Hurley Collection”) from January through November, 2011.

The treatment of the beaded pouch necessitated multiple approaches:

- » cleaning by dry brushing and vacuuming
- » humidifying the leather and fringe, depending on the results of shrinkage temperature measurements
- » reshaping the pouch and inserting just enough acid-free tissue to maintain the object’s shape without putting stress on the seams
- » repairing the tears and securing delaminating areas of the leather

Before treatment



After treatment



▲ This beaded pouch is one example of the many gifts Maisie Hurley received from the Aboriginal community in recognition for her advocacy work for Aboriginal rights in Canada. Dr. Sharon Fortney, co-curator of the exhibition with Damara Jacobs, explains that the exhibit reveals relationships that continue to be meaningful for the Squamish Nation. "The combined advocacy of the Squamish elders showcased in this exhibit, and non-native supporters, such as Maisie and Tom Hurley, enables the current generation to continue to build collaboration."

Miniature baby buggy: Object and textile conservators treated a miniature replica of a full-size baby buggy, hand-made by a professional carriage builder and property of the Royal Alberta Museum in Edmonton, Alberta.

The carriage was cleaned using a vacuum, dry brushing, and, where necessary, gentle washing with distilled water and non-ionic detergent. Flaking and lifting paint was consolidated with adhesive. A new wooden dashboard was made and inpainted to match the rest of the carriage, and broken and deformed structural elements were repaired.

The upholstery was vacuumed and dry brushed. Neutral-coloured fabric was also inserted under losses of the fabric on the seat cushion and under losses on the chair arms to reinforce these fragile areas and make them less visible when on display. Padding was inserted along the top of the proper right arm to restore it to its proper shape.

Before treatment



After treatment



▲ Miniature replica of a full-size baby buggy, hand-made by a professional carriage builder. This is a rare example of a baby carriage that includes many carriage builders' construction details.

The Great Eastern at Heart's Content: *The Great Eastern at Heart's Content* is a painting from the archives of the Anglican Cathedral of St. John the Baptist in St. John's, Newfoundland and Labrador (NL). It depicts a pivotal event in Canada's pioneering role in the development of telecommunications technology, i.e. the arrival of the SS *Great Eastern*, July 27, 1866, at Heart's Content, NL on completion of the laying of the first underwater trans-Atlantic telegraph cable from its starting point in Valencia, Ireland. Fine Arts conservators addressed extensive surface abrasion and losses with retouching and revarnishing in stable, non-yellowing media.

Moccasin Seller Carrying Papoose: CCI's Fine Arts lab treated *Moccasin Seller Carrying Papoose*, a painting from the collection of the MacKenzie Art Gallery in Regina, Saskatchewan, by nationally renowned 19th-century Canadian artist Cornelius Krieghoff. In 2006, conservation scientists analysed a sample of the cloudy surface coating, which proved to be a co-polymer of methyl methacrylate and n-butyl acrylate — a modern coating. UV examination of the painting revealed that the background sky and part of the foreground had been entirely overpainted in a solvent-sensitive paint. Fine Arts conservators removed the overpaints and surface coating to reveal paint loss as well as a very heavy crack pattern. The decision was made to consolidate and then relax the paint layers and canvas back into plane without flattening the tacking margins. A jig was designed and built by the conservators to carry out this procedure. The painting has been secured to the original stretcher over a transparent solid support that allows the back of the painting to be seen, and to retain, as much as possible, its original characteristics. Some retouching and reintegration were also needed to restore the delicate beauty of Krieghoff's scene to its original appearance.



KUDOS CORNER

The needlework arrived safely (...). We were all very impressed by how good it looks. Very, very pleased with the results.

Curator of Cultural Property,
Municipality



▲ During treatment. The surface coating and overpaints have been removed.



▲ During treatment. Raking light shows the extensive cracking.



▲ After treatment.

Scientific Services

Burial cloths from Madagascar: A conservation scientist analysed two silk burial cloths from Madagascar (circa 1850–1899), from the collection of the Royal Ontario Museum (ROM) in Toronto, Ontario, to identify the dyes. The cloths both feature vibrant colours and, based on their ages, may contain threads dyed with early synthetic dyes, such as mauveine. Analysis was performed using novel gas chromatograph-mass spectrometry (GC-MS) methodology. Dyes on the first cloth consisted of natural materials including indigo, safflower, turmeric, and tannins. These dyes were used individually and in mixtures to produce the magenta, blue, yellow, purple, burgundy, teal, and black colours of the cloth. Both natural and synthetic dyes were identified on the second cloth. The natural dyes were identified as indigo, turmeric, and tannins, and the synthetic dyes as diamond green (basic green 4), crystal violet (basic violet 3), and erythrosine (acid red 51). The dyes were detected individually and in mixtures on the silk threads to produce the aqua, pink, red, purple, green, blue, yellow, and black colours. Interestingly, both natural and synthetic dyes were detected on some threads. This unusual practice of mixing natural and synthetic dyestuff was likely a product of the dyeing time period, when the earliest vibrant synthetic dyes were being introduced and natural dyes remained in common use.

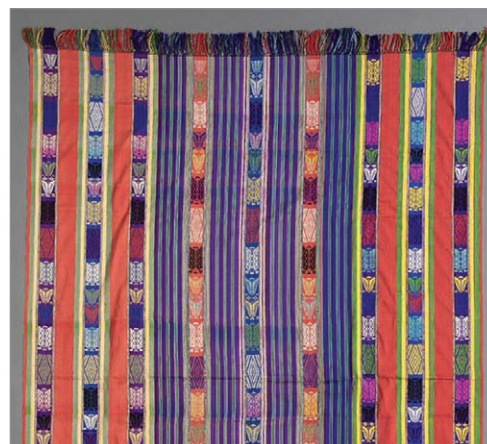
Cloth 1

Burial cloth from Madagascar (circa 1850–1899), from the ROM.



Cloth 2

Burial cloth from Madagascar (circa 1850–1899), from the ROM.



▲ The akotifahana cloths of Madagascar come into museum collections through estate sales and dealers. Without knowing the specific dates these items were created, and in the absence of stylistic changes through time that would provide an indication of their age, they are extremely difficult to date precisely. Determining whether or not a cloth has natural or man-made dyes is, therefore, crucial for dating. CCI's ability to establish precise dates linked to the invention of certain types of dyes allowed the ROM to pinpoint more exactly the age of this cloth, and aided understanding of other similar collections around the world.

Madagascar Island lies between Africa and Eurasia, and has been at the crossroads of cloth trading for 2 millennia. Knowing the dye sources of these cloths has helped the ROM to pinpoint which nations (India or Arabia) influenced hand weaving on the island and brought them weaving supplies. Having one of the oldest collections of textiles from Madagascar, Canada contributes to these questions and to this field of knowledge.



Malépart de Beaucourt paintings: François Malépart de Beaucourt has been recognized as the first Canadian painter to have developed his technique in Europe. The materials of two of his paintings, one dated 1786 and the other 1787, were studied by CCI's Conservation Science Division. A comparison of the materials was of interest since recent research suggests that they were both painted in Saint Domingue (now Haiti), a location where there would have been a limited supply of artists' materials. The paintings, one in the collection of the Montreal Museum of Fine Arts and the other in the collection of the McCord Museum (both in Montreal, Quebec), were examined and sampled on site. Detailed information about the pigments, media, and layer structure of the paint was obtained. It was found that the materials of the two paintings were very similar.

Preventive Conservation

Survey of public art at the New Brunswick Centennial Building: The Province of New Brunswick is planning extensive renovations to the Centennial Building in Fredericton, which houses the offices of the Province of New Brunswick. The murals, mosaics, metal art assemblages, and wooden relief sculptures were commissioned for Canada's Centennial in 1967, and installed throughout the six-floor building. The artwork was executed by some of Canada's most prominent artists in the 1960s: John Hooper, Claude Roussel, Bruno Bobak, Jack Humphrey, Tom Forrestall, and Fred Ross.

CCI developed a plan to protect these artworks during the rehabilitation of the building. The plan addresses demolition risks, vibration, impact damage, dust and moisture, and changes to the indoor climate during renovations. In consultation with the New Brunswick Art Bank, CCI also provided costing, scope, and a process for the conservation treatment of this important public art collection, prior to Canada's 150th anniversary in 2017.

Relocation of monuments and chandeliers in the West Block of Parliament Hill: The CCI Heritage Interiors team is working with the [Parliamentary Precinct Branch of Public Works and Government Services Canada](#) (PWGSC) during the renovations of the West Block (originally called the Western Departmental Building) on Parliament Hill in Ottawa, Ontario, a project that will last through to 2016. Renovations of these buildings will affect many different types of heritage objects, and CCI's expert services will help to ensure these significant heritage collections are protected.

When sculptures of the Right Honourable Sir Robert Borden and the Right Honourable John Diefenbaker were affected by the reconstruction of the West Block, CCI developed a plan to relocate them. By moving these commemorative statues of two former Canadian Prime Ministers to a new location behind the Library of Parliament (instead of moving them to storage as had been planned), they remain accessible to Canadians. The site selection options, soil testing, temporary concrete pad designs, granite plinth and statue relocation, and the hoisting operations were coordinated by CCI with the cooperation of the Parliamentary Precinct Branch of PWGSC and the assistance of professional stonemasons and carpenters.



KUDOS CORNER

(...) take this opportunity to thank you and your staff for the excellent work of your organization. CCI, although centered in Ottawa, is thought of by the NB Museum community as an organization that we can consider when we need help with a technical museum need, (...) Even when our needs could not be met because of time and cost factors, your staff normally gives us viable alternatives to pursue.

*Volunteer,
Heritage Organization*



CCI also worked to protect six monumental Regency-period chandeliers (1844). These chandeliers were originally commissioned for the Royal Assembly Rooms in Liverpool, England. Canada's Department of Public Works in London purchased them for the Confederation Room in the West Block in 1961. When the decision was made to return the Confederation Room to its original purpose, i.e. offices for parliamentarians, CCI disassembled, cleaned, and packed the chandeliers for their safe transport and storage prior to the decommissioning and demolition of the room.



▲ The statue of Sir Robert Borden is moved from temporary storage to its new location behind the Library of Parliament.



▲ The Borden statue is installed on its reassembled plinth.



▲ One of the chandeliers is inspected before being disassembled.



▲ Once disassembled, the individual components of the chandelier are packed.



KUDOS CORNER

This report is exactly what I asked for and more! I am impressed with your ability to explain the analysis clearly, discuss the results and also make various conclusions based on analysis. (...) Thank you for your help in deciding how to preserve these artifacts while taking the entire Collection into consideration.

*Conservator
and Collections Manager,
Federal Institution*

Risk assessment pilot project at Glanmore National Historic Site: Glanmore National Historic Site in Belleville, Ontario, built in 1882–1883, is an exceptional example of 2nd Empire architecture. CCI carried out its first comprehensive risk assessment at this historic house — a pilot project using methodology and tools that have been developed over the past few years in collaboration with the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM), based in Rome, and the Instituut Collectie Nederland (ICN), based in the Netherlands. The key risks to the collection were identified, and their severity was ranked based on the likelihood (or speed) of an event occurring, the loss of value that would result, and the amount of the collection that would be affected. Options were presented for addressing the most important risks, with an indication of their cost and cost-effectiveness. This report has allowed the heritage institution to identify its priorities, and to target those risks that are most likely to cause the greatest loss in collection value.



▲ Glanmore National Historic Site, built in 1882–1883, is an exceptional example of 2nd Empire architecture.



▲ Silverware in the dining room could eventually lose detail and inscriptions from annual polishing to remove tarnish buildup. Applying a lacquer coating would keep the silver tarnish-free and eliminate the need for regular polishing.

Inuit Heritage Trust Fly-In Conservator Program: Four Inuit Heritage Trust sites in Nunavut (Pond Inlet Archives and Nattinnak Visitor Center in Pond Inlet, and Unikkaarvik Visitors Centre and Nunatta Sunakutaangit Museum in Iqaluit) benefited from CCI's facility assessments and training services. CCI spent several days at each location, carrying out both training activities and a facility assessment. Each site was also provided with a written report that included the results of the assessment and some recommendations for future actions to enhance preservation of the collections.



◀ An interpretive exhibit of Inuit lifestyle in the Pond Inlet region.



KNOWLEDGE DISSEMINATION— PROFESSIONAL DEVELOPMENT PROGRAMS

Performance in 2010–2011

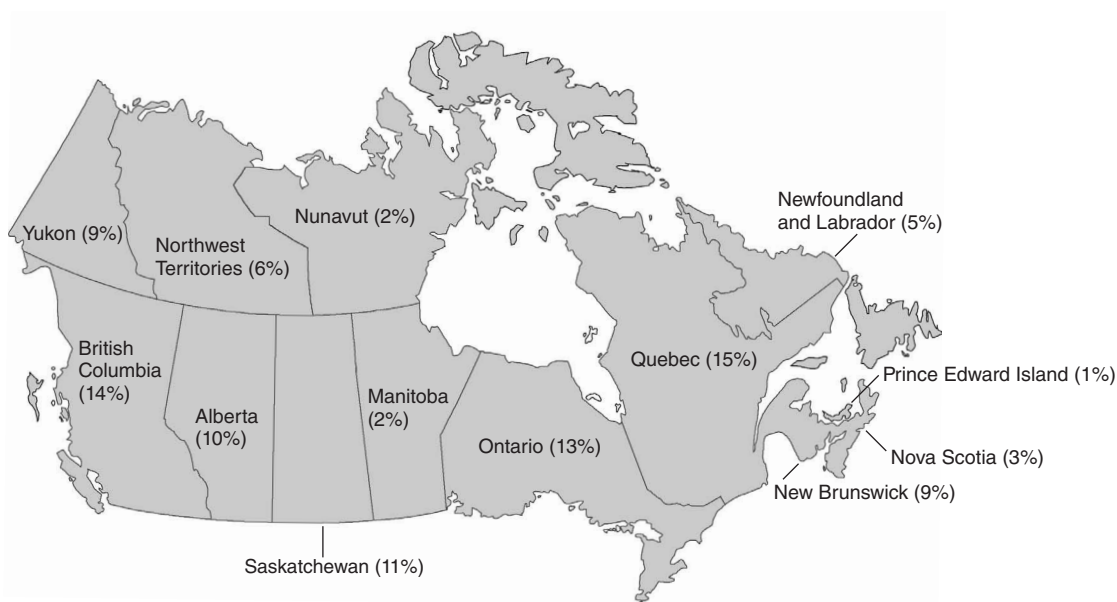
ACTIVITIES – OUTPUTS:

CCI conducted 41 learning events (40 in Canada; 1 in the United States). There were 388 participants (348 from Canada; 40 from seven other countries) in CCI learning programs, including internships and mid-career development programs.

Regional workshops in Canada: Two hundred and ninety-eight (298) Canadian participants learned about care of collections on display, in storage, and in transit at twenty-two 2-day hands-on regional workshops delivered in all provinces and territories. The most popular workshops were:

- » Emergency and Disaster Preparedness for Cultural Institutions (delivered 4 times)
- » Storage Planning (delivered 3 times)

PERCENTAGE OF CCI WORKSHOP PARTICIPANTS FROM EACH PROVINCE-TERRITORY



KUDOS CORNER

CCI facilitators focused on practical applications of the practices and techniques presented. The info on products, charts for prioritizing and what to look for in a plan will all help with our plan development. The emergency binder will be very useful (...). It was a well researched and well presented workshop.

*Participant,
Emergency and Disaster
Preparedness workshop*



PERFORMANCE INDICATORS:

INDICATOR	RESULTS IN 2010–2011
Heritage institutions and heritage workers improved their professional knowledge, skills, and practices	<ul style="list-style-type: none"> • 79% of participants answered the training evaluation survey <ul style="list-style-type: none"> » 100% of them reported improvement
Canadian and international heritage institutions and workers took part in CCI learning opportunities	<ul style="list-style-type: none"> • 260 heritage institutions benefited from CCI learning programs <ul style="list-style-type: none"> » 220 Canadian institutions » 40 foreign institutions • 388 individuals participated in CCI learning programs <ul style="list-style-type: none"> » 348 from Canada » 40 from other countries

Advanced Professional Development workshops: 40 Canadian and 29 foreign conservators and other museum professionals attended three Advanced Professional Development workshops on technical and scientific aspects of conservation.

- » *Identification and Care of Plastics in Museum Collections* dealt with caring for and preserving plastics, and was delivered in partnership with the Canada Science and Technology Museum (CSTM) and the Canadian Association for Conservation (CAC). Through lectures, lab work, and guided study tours of a museum collection, conservators learned the basics of composition, identification, and degradation of plastics, with an emphasis on the plastics most commonly encountered in museum collections and those that are most likely to degrade or to damage other objects in the collection (malignant plastics). Hosted at CSTM, 20 participants (from Canada, Austria, Portugal, and the United States) attended this 2-day workshop.
- » *The Conservation of Feathers* explored the structure and nature of feathers and feathered objects and the causes of their deterioration. Delivered in collaboration with the CAC through a combination of theoretical and practical sessions, invited speakers addressed the fading of feather colours, laser cleaning, dying techniques, and care of feathers in natural history. Thirty individuals (representing heritage institutions in seven provinces in Canada as well as Austria, New Zealand, the United Kingdom, and the United States) attended the 3-day program held at CCI.
- » *Integrated Pest Management* mixed illustrated talks, group participation challenges, and demonstrations of the principles of heat disinfestation as well as a free flight pheromone lure in a 1-day event. Nineteen participants (from Canada, France, the United Kingdom, and the United States) attended this course at CCI. It was organized for the international Society for the Preservation of Natural History Collections (SPNHC) and the Canadian Botanical Association (CBA/ABC) joint conference *Biodiversity 2010 and Beyond, Science and Collections*.



KUDOS CORNER

I have been forced to relinquish some cherished misconceptions and force my mind to accept new possibilities. (...) I liked that experimentation was encouraged and that questions were invited.

*Participant,
Advanced Professional
Development workshop*



KUDOS CORNER

(Supervisor's name), I just wanted to express my sincere gratitude to you for your guidance and mentorship during my time at CCI. Thank you (...) for giving me several opportunities to demonstrate my capabilities to our colleagues. I truly appreciate your openness, and your consideration for my career and my future.

*CCI Intern,
Conservation Program*

Visiting Professionals program: A retired scientist, welcomed last year as a Visiting Professional in Conservation Research, continued his work on the use of electrochemistry in conservation.

Internships: CCI staffed five conservation internship positions for Canadians (one each in Preservation Services, Fine Arts, Textiles, Archaeology, and Objects) for 1-year terms focusing on early career experience. The program has been a benefit not only to the next generation of young conservators, but also to CCI's succession planning.

CCI also welcomed seven curriculum interns (unpaid) — two Canadian students (from Queen's University in Kingston, Ontario and Fleming College in Peterborough, Ontario) and five international students (from foreign institutions such as the University of Delaware, l'Université de Paris – la Sorbonne, University of Applied Arts – Vienna, l'Institut national du patrimoine – Paris and CESI Saint-Nazaire in France).

Fellowships: CCI continued to benefit from the presence of two [Canadian Government Laboratory Visiting Fellows](#).

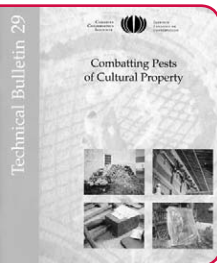
- » A graduate of both Queen's University in Kingston and Imperial College London continued his work on building risk assessment models and carrying out experimental work on the thermo-hygro-mechanical response of canvas paintings, in addition to contributing to building an apparatus for light fading experiments.
- » A graduate of McGill University in Montreal, Quebec, the Università degli Studi di Bologna, and the Università degli Studi di Perugia (as part of the conservation science program EPISCON) continued to investigate applications of the Raman microscope and to respond to client requests.



▲ The Conservation of Feathers workshop.



▲ Identification and Care of Plastics in Museum Collection workshop.



KNOWLEDGE DISSEMINATION— PUBLICATIONS AND ONLINE LEARNING MATERIALS

Performance in 2010–2011

ACTIVITIES – OUTPUTS:

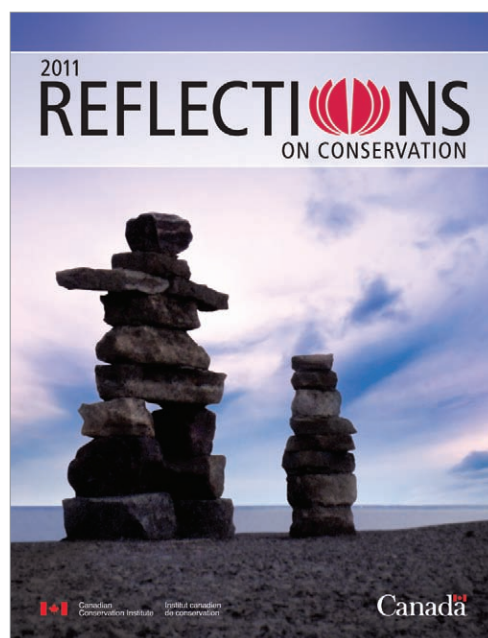
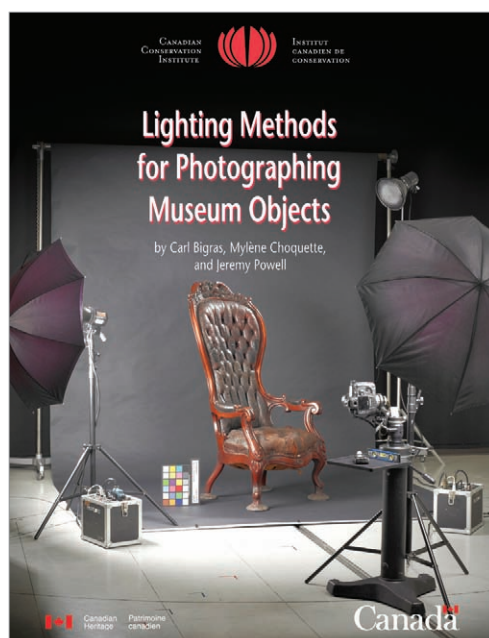
CCI published a new book, *Lighting Methods for Photographing Museum Objects*, to help users improve their photographic documentation skills. Printed in a practical spiral-bound format, this guide demonstrates how lighting can shape and highlight the features of an object in a photograph. Useful for professional photographers, curators, heritage professionals, or students, the book includes 15 lighting techniques, all of which are clearly explained and illustrated with colour photos.



KUDOS CORNER

I am pleased to see that the publication (*REFLECTIONS* on Conservation) caters to the international community of people interested in conservation of heritage sites and cultural collections, like myself. Being a socio-cultural anthropologist I have always been keen about heritage and its conservation issues, but unfortunately not professionally trained to be able to do anything practically to participate in conservation work that is highly specialized field. (...) I congratulate you for such a beautiful and extremely interesting publication.

*Anthropologist,
Pakistan*



CCI also released the 2011 issue of *REFLECTIONS on Conservation* and sent it to more than 3,500 subscribers and distributed it at corporate events and tradeshows. This second volume of the CCI magazine examined the conservation of heritage collections from the perspective of sustainability, exploring how CCI can help museums and other heritage institutions to be economically and environmentally sustainable without jeopardizing social and cultural sustainability.

Publications: 789 CCI publications were distributed in Canada (49%) and abroad (51%). The three most popular publications were:

1. *Lighting Methods for Photographing Museum Objects*
2. *Mount-making for Museums Objects, Second Edition*
3. *Metals and Corrosion : A Handbook for the Conservation Professional*



KUDOS CORNER

As a former Risk Manager, I am particularly taken with the “Sustainability of Cultural Heritage” and the “Sustaining Cultural Heritage in the Wake of Disaster” articles (in *REFLECTIONS on Conservation*) as being relevant to (collection’s name) around the globe — notwithstanding that the facility structures are also at risk from climatic influence.

*Executive Director,
New Zealand Heritage Organization*

(...) when I am teaching “Preventive Conservation (...) your book on Pollutants is a basic reference to my students.

*University Assistant Professor,
Department of Conservation
and Restoration,
Portugal*

Library Services: Library staff handled 403 requests for service from external clients:

- » 258 books were loaned
- » 114 articles were distributed
- » 31 reference questions were answered

CCI website: There were 123,609 unique visitors to CCI’s main website, of which 13,659 consulted learning material documents designed for the heritage community. These 123,609 unique users visited a total of 653,696 pages, and 10,166 of them visited the following top three Conservation Resource Centre materials:

1. [Ten Agents of Deterioration](#) (consulted 7,932 times)
2. [Environmental Guidelines for Museums — Temperature and Relative Humidity \(RH\)](#) (consulted 5,348 times)
3. [Combatting Pests of Cultural Property](#) (consulted 2,776 times)

Preserving my Heritage (PmH) website: There were 51,551 unique visitors to the PmH website, which contains learning materials designed for the general public and museum volunteers. They visited a total of 105,598 pages with the top three documents consulted being:

1. How to Care for: [Paper Documents and Newspaper Clippings](#) (consulted 1,351 times)
2. How to Care for: [Books](#) (consulted 1,156 times)
3. How to Care for: [Brass, Copper, and Bronze](#) (consulted 1,083 times)

PERFORMANCE INDICATORS:

INDICATOR	RESULTS IN 2010–2011
Canadian and international heritage institutions and workers used CCI’s learning opportunities	<ul style="list-style-type: none"> • 375 online learning documents were downloaded 178,784 times



CORPORATE INITIATIVES

Performance in 2010–2011

Media relations: Interest from the media was particularly high as a result of the variety of interesting objects and treatments undertaken. For instance, CCI fielded dozens of calls from media across the country after it was reported that Senior Archaeology Conservator Tara Grant had assisted with the excavation of a box from a cairn in Gjoa Haven, Nunavut. The box was purported to contain items related to Arctic explorers Sir John Franklin or Roald Amundsen. Tara was interviewed for both radio and television. While the box did not contain the objects thought to be inside, this was a significant and exciting undertaking for CCI given the importance of the materials it may have contained.

Media also contacted CCI after the airing of the story of the Tsiigehtchic steppe bison on Discovery Channel's *Daily Planet* in January 2011. The episode featured Senior Archaeology Conservator Tara Grant discussing the science behind the preservation of the bison skin. Also featured were other CCI staff assisting with the work (Jessica Lafrance, Intern), taking photographs (Mylène Choquette, Scientific Documentation Technologist), and performing image analysis (Gregory Young, Senior Conservation Scientist).

Doors Open Ottawa: On June 5, 2010, CCI participated for the second time in *Doors Open Ottawa*. More than 230 visitors came for a behind-the-scenes look at CCI's operations — an increase in the number of visitors who came in 2009 — despite a significant number of new locations participating in the event with significant marketing to promote these new venues.



▲ Visitors had an opportunity to view demonstrations in various CCI labs during *Doors Open Ottawa*.



KUDOS CORNER

Seeing the photographs of objects being treated in the conservation labs was great, and when we got to the photography lab we understood how it all fits together. The photo lab is great!

I never knew about all the research that goes into the field of conservation.

CCI is one of the top 3 locations to visit!

We visited CCI last year, this year, and we'll be back again next year!

*Various visitors' comments,
Doors Open Ottawa*

e-Services: The e-Services client database increased by 11%, with 360 new clients joining the 2,242 clients registered since 2007. Of the 2,602 registered users, 77% are from Canada and 23% are from other countries.

CCI e-News: Four hundred and twenty-two (422) new clients registered for *CCI e-News*. The distribution list now comprises 7,370 clients, of which 42% are from Canada and 58% are from other countries.

Client Services: CCI staff responded by telephone or e-mail to 999 requests for information, of which 530 were for scientific and/or technical advice.

CCI Notes: CCI Notes were consulted 96,299 times.

Human resources: Five long-standing and expert conservation and scientific staff retired: David Grattan, Michael Harrington, Siegfried Rempel, David Tremain, and Brian Laurie-Beaumont. Following an internal reorganization, there is now four Divisions to deliver CCI services:

- » Conservation Science Division
- » Treatment and Collections: Fine Arts, Furniture and Heritage Interiors Division
- » Treatment and Collections: Textiles, Archaeology, Objects, Paper Division
- » Preservation Services Division

At the same time, CCI is looking to future client needs by hiring new experts, including Eric Hagan who was hired as a conservation scientist to carry out research on the effects of water (hygro) and temperature (thermo) on properties of materials. Other staffing actions completed or underway include the hiring of a book conservator, a conservation scientist, a Manager of Preservation Services, and a preservation advisor.

In addition to hiring conservators and conservation scientists, CCI also hired a new Research and Reference Librarian to fill an existing vacancy. We also began the process of hiring two editors, English and French. These positions are critical for CCI's knowledge dissemination and professional development activities.



PARTNERSHIPS

Performance in 2010–2011



KUDOS CORNER

I would like to thank you both, the Canadian Association for Conservation conference organizing committee and CCI staff; for your support in presenting the Plastic workshop. (CCI conservation scientist's name) expertise is unparalleled in the field of plastics in conservation, and it was a pleasure and an honour to be able to present the workshop with him. I believe we have built solid groundwork for future collaboration in this field and look forward to working with him in the near future.

*Manager Conservation,
Federal Museum, Canada*

The course (in Haiti) concluded on a high note. We received a very positive feedback during the final evaluation session and several parting gifts. (...) Thank you very much for taking on this very challenging work. We at ICCROM are grateful for your help in the successful implementation of this first activity in Haiti and sincerely hope that we will have more opportunities to work with you.

*Curator and Art Conservator in India,
Haiti Project Leader, ICCROM*

The course content (in Haiti) was of high quality and focused on current methodology, thanks in large measure to (CCI senior conservator's name) involvement. (She) willingly and cheerfully worked long hours to customize the course on a daily basis. Her great knowledge and kind approach were truly appreciated by the course participants and her conservation colleagues alike.

*Chief Conservator
of a National Museum,
Partner in Haiti Project, USA*

Building capacity in Haiti: CCI was one of many partners in a 3-week pilot workshop on emergency recovery measures and disaster prevention for cultural heritage that was organized by the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM) in response to the devastating earthquake that struck Haiti on January 12, 2010. Held at Port-au-Prince in summer 2010, the workshop was aimed at building capacity within Haiti's cultural community — training 26 Haitian heritage professionals (representing 15 Haitian cultural institutions) who would, in turn, train their colleagues and peers.

Saving Energy, Preserving Collections: Held at CCI in January 2011, *Saving Energy, Preserving Collections* was a meeting that brought together, for the first time, 39 federal representatives of six national museums and five heritage programs to discuss an increasingly important issue facing all of them. The meeting's purpose was to discuss various aspects of sustainability, opportunities for energy savings, and environmental conditions both within museums and as loan conditions. Initiated by CCI, *Saving Energy, Preserving Collections* was an opportunity to share new sustainability initiatives and discuss areas of agreement on topics such as operating more efficiently, greening museums, and imposing less rigorous loan requirements for exhibitions. The results of the meeting will be disseminated to the museum and conservation communities in Canada. Discussions will also continue with the representatives of the national museums and heritage programs to follow up on specific points that came out of the meeting.



▲ Participants in the Haitian workshop used CCI's *Framework for the Preservation of Museum Collections Wall Chart* to increase their knowledge of the various agents of deterioration that have an impact on heritage collections and learn how to deal with them.

*Photo taken by Vesna Živković, curator
© Central Institute for Conservation, Belgrade*



▲ Church in Haiti devastated by the earthquake in 2010.



Financial Statement for 2010–2011

REVENUES	
Appropriation	7,262,050
Transfer of custody of real property to PCH-CCI	2,529,697
Vote-netted revenue ¹	500,000
Crown asset funds	7,611
Total – Operating budget	10,299,358
EARNED REVENUES	
Publications and library services	44,680
Conservation and scientific services	215,955
Total – Earned revenues	260,635
Total – Operating budget and earned revenues	10,559,993
EXPENDITURES	
Salaries	6,339,361
Building operations ²	2,322,108
Program operations ³	1,151,074
Total – Operating costs	3,473,182
Total – Expenditures	9,812,543
Refund – Vote-netted revenue	500,000
Total expenditures and refund of vote-netted revenue	10,312,543
Subtotal	247,450
Crown asset transfer to Fiscal Year 2011–2012⁴	(3,142)
Total balance	244,308

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 Custodian 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, professional services (including contractual work, consulting, and advisory contracts).

⁴ Unused funds for crown asset transferred to FY 2011–2012.