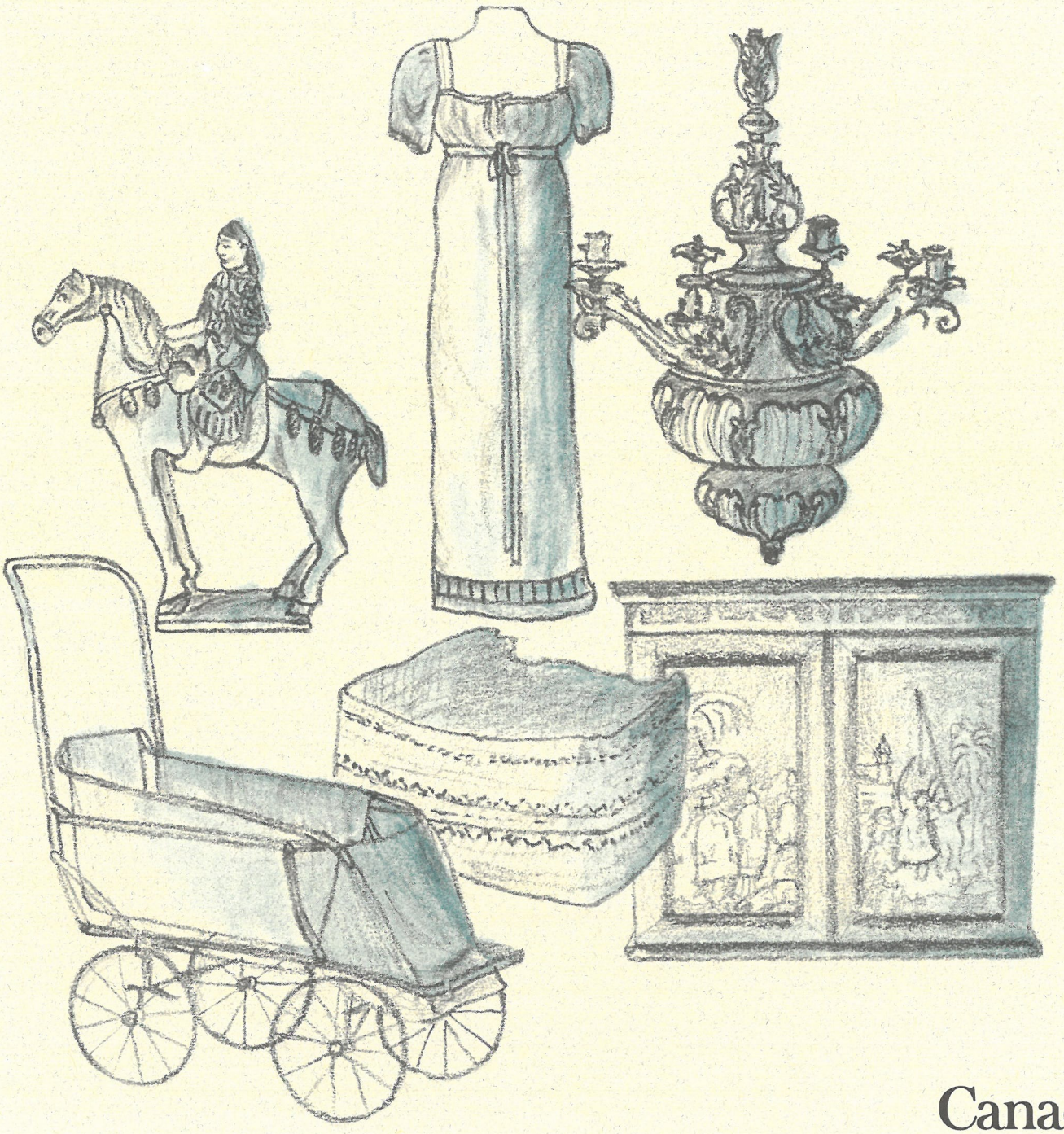
Canadian Heritage | Patrimoine canadien

Canadian Conservation Institute | **Institut canadien de conservation**

Annual Report

1993 - 1994



Canada

Canadian Heritage / Patrimoine canadien

Canadian Conservation Institute / Institut canadien de conservation

September 7, 1994

Mr. Marc Rochon
Deputy Minister
Department of Canadian Heritage
25 Eddy Street
Room Nos. 12-14
Les Terrasses de la Chaudière
Hull, Quebec
K1A 0M5

Sir:

I submit for your consideration the 1993-94 Annual Report of the Canadian Conservation Institute.

The Annual Report describes the major activities of CCI staff during the 1993-94 fiscal year. The Canadian Conservation Institute, a Special Operating Agency of the Department of Canadian Heritage, has a mandate to promote the proper care and preservation of Canada's moveable cultural property, and to advance the practice, science, and technology of conservation. The many accomplishments highlighted in this Report reflect the dedication and commitment of CCI employees to achieving this goal. It also demonstrates the important role played by the Government of Canada in preserving and maintaining museum, art gallery, and archival collections for future generations.

Respectfully submitted,

Charles G. Gruchy
Director General and
Chief Operating Officer

Canada

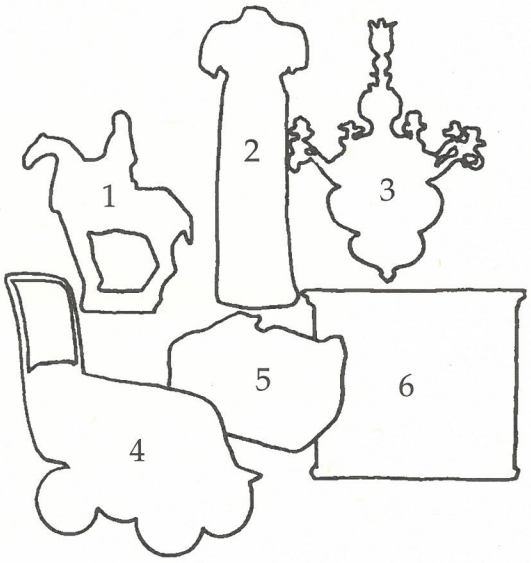
Mandate

"The mandate of the Canadian Conservation Institute is to promote the proper care and preservation of Canada's moveable cultural heritage, and to advance the practice, science, and technology of conservation."

Framework Document, 1992

For additional copies or for further information about CCI services or programs, please contact

Canadian Conservation Institute
1030 Innes Road
Ottawa, Ontario
K1A 0M5
Tel.: (613) 998-3721
FAX: (613) 998-4721



Front Cover

1. 'Tang horse, University of British Columbia Museum of Anthropology, Vancouver, British Columbia.
2. Silk dress, Lundy's Lane Historical Museum, Niagara Falls, Ontario.
3. Chandelier, Fulford House, Brockville, Ontario.
4. Baby buggy, Craig Park and Museum, Parksville, British Columbia.
5. Northwest Coast Indian basket, Université de Montréal, Montreal, Quebec.
6. Sewing cabinet, Hastings County Museum, Belleville, Ontario.

ISSN 1195-8669
ISBN 0-662-60132-7
Cat. No. NM95-61/1994

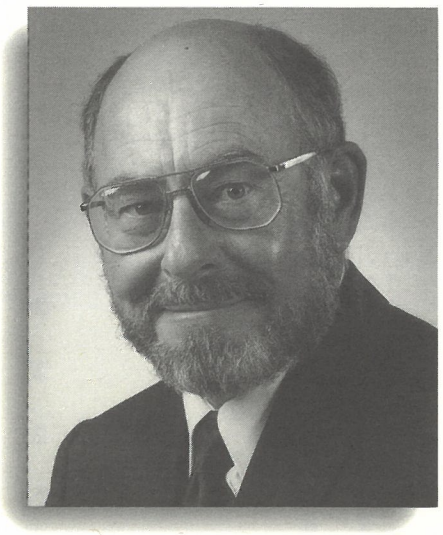
Printed in Canada

This publication is printed on recycled paper.

Table of Contents

Introduction

As one of the many changes that the federal government has undergone during the past year, the Canadian Conservation Institute (CCI) became part of the Department of Canadian Heritage. The creation of this new department recognizes the unique nature of being Canadian and the fundamental role that our past plays in the future development of our country. I am very pleased that the importance of culture, heritage, and Canadian identity have taken such a prominent place within the government. CCI is proud to be able to make a significant contribution to the preservation of our Canadian heritage through the Institute's programs and activities.



CCI is vitally concerned that our services to museums, archives, and art galleries are delivered promptly and professionally. To learn more about how our services are perceived, a client survey by independent consultants was carried out on behalf of CCI in 1993-94. The survey's goal was to discover the factors that are important to clients about the way in which CCI staff deliver services, respond to requests, and provide information. A random sample of clients who had used CCI services — conservation treatments, requests for advice, analytical services, and surveys — within the last two years were either sent a questionnaire or received a telephone call. Although the survey results indicate some areas where we can improve, most clients surveyed were favourably impressed with our services. These data will be used as a baseline for future surveys to ensure that we continue to improve and better serve our clients.

Conservation research carried out within the federal government has, in the past, mostly been done by CCI and by the National Archives of Canada. Both organizations recognized that there would be mutual advantages to centralizing research facilities. As a result, the National Archives of Canada Conservation Unit research staff and equipment were transferred to CCI. We are very pleased to have these new staff members with us, and I trust that they will find the opportunities to become involved with a larger group of scientists stimulating.

No one who works in museums or related institutions in Canada has been immune to the impact of reduced funding, and CCI has been no exception. During this year, we have trimmed programs and activities, but in ways that have probably not been obvious to our clients. During the next fiscal year, there will almost certainly be further reductions, and we expect that these will affect some of our services. As we examined our various programs in anticipation of these cuts, we felt that our clients would want us to continue to deliver services that have been well established. On the basis of informal consultation across the country, we find that reducing recently implemented programs (for which we received funding under the 1990 Canadian Museum Policy) would have the least impact on clients. On this basis, we expect to reduce the Priority Conservation Projects Program, although several projects will still be completed under this initiative. During the next fiscal year, CCI will critically review all of our activities in anticipation of further reductions. This can be a healthy exercise: we may even find better ways to do some things.

In summary, the necessity of preserving museum, art gallery, and archival collections for future generations has never been more evident. CCI continues to make an important and worthwhile contribution to the preservation of these collections, and intends to go on providing a high level of service. As always, input from the museum, art gallery, and archival communities is most welcome.

Charles G. Gruchy
Director General and
Chief Operating Officer,
Canadian Conservation Institute

Conservation Treatment

Treating an 1817 silk dress.

The long-term objective to increase the total number of conservation treatment hours provided to the Canadian museum community was again given high priority in the Conservation Services Directorate. The treatment goal of 18,000 hours set for 1993 was exceeded by over 500 hours. Conservation staff completed the treatment of 49 works of art and artifacts and of 347 archaeological objects during the year. Work continued on over 80 other treatment projects.

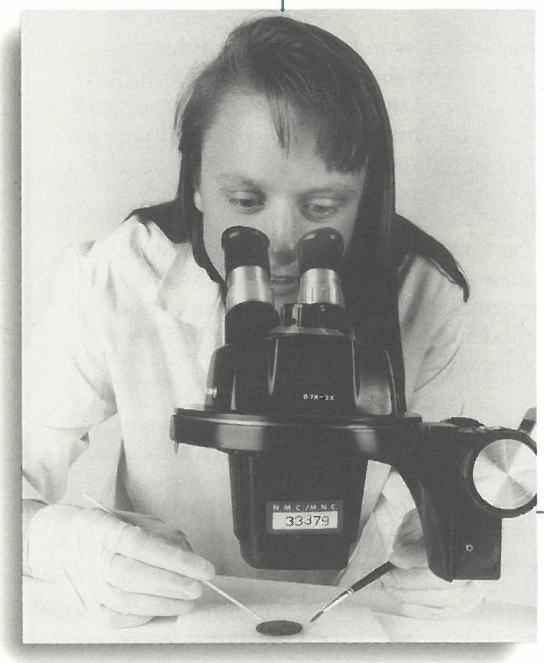
CCI received 74 new requests for conservation treatment during 1993-94. Of these, 18 were rejected because they did not meet CCI's acceptance criteria. Thirty-five requests were approved, of which eight were completed, 11 are in the process of being treated, and 16 are awaiting treatment. The remaining 21 requests were still being processed and evaluated at year end.

Descriptions of some of the many interesting projects worked on in 1993-94 follow.

Textiles Section

The treatment of a dress worn by "Klondike Kate" during the Gold Rush, now the property of the Dawson City Museum, Yukon Territory, was completed in the early summer of 1993. Conservation of a delicate silk dress belonging to Lundy's Lane Historical Museum, Niagara Falls, Ontario, and worn by Jannet Cooper at her wedding in 1817 was completed in early 1994. The Textiles Section also treated several Peruvian textile fragments belonging to the Université de Montréal, Montreal, Quebec. Treatment began on several other artifacts, including two officers coats belonging to the Prince Edward Island Museum and Heritage Foundation, Charlottetown, P.E.I., and a double-sided painted silk banner belonging to the Historical Museum of St. James-Assiniboia, Winnipeg, Manitoba. The Textiles and Ethnology Sections collaborated on reproducing the textile components of a baby buggy that dates from the turn of the century and that belongs to the Craig Park and Museum, Parksville, B.C.

The Textiles Section also began a very complex project, due for completion in January 1995: the conservation of the unique Gondar Hanging, a tablet-woven silk hanging measuring 5.22 meters by 2.14 meters. The Hanging was probably



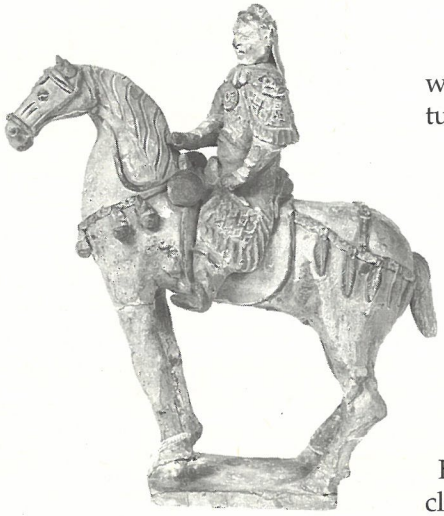
Cleaning a coin found at Ferryland.

Coins from Ferryland, Newfoundland

The Archaeology Section completed recording and stabilizing 14 coins found during the 1993 field season at the site of Ferryland, Newfoundland. The colony at Ferryland was established in 1621 by George Calvert, later the first Lord Baltimore.

The coins range from a James I Irish sixpence piece (1604-1607) to an 1872 Newfoundland penny. Conservation of the coins involved x-radiography; cleaning with wooden picks, dental tools, and brushes; and chemical stabilization in benzotriazole solution. Curators from the Currency Museum, Bank of Canada, assisted in identifying the coins.

The excavations at Ferryland are being conducted by Memorial University and are funded by the Canada-Newfoundland Cooperation Agreement on Tourism and Historic Resources (1991).



A 'Tang horse treated at CCI.

woven in the 18th century, and hung in a church in Gondar, Ethiopia, until the 19th century. It became the property of the Royal Ontario Museum in the 1920s. Planning the treatment for the Hanging has involved close collaboration among conservators, scientists, curators, and art historians. The Hanging was washed in an oversize low-pressure suction table, specially designed and constructed by CCI and described in this Annual Report under "Conservation Research". Repairs to the fabric and construction of a support for storage and display will continue through 1994.

Archaeology Section

The Archaeology Section treated numerous artifacts from sites in the Arctic, many requiring the development of improved treatment techniques for baleen objects. Experimental stabilizing treatments were applied to many composite objects from the site at Red Bay, Labrador. Electrolysis treatment was started on a collection of trade axes from a 17th-century trading post that had been excavated in New Brunswick in the 1920s. A collection of artifacts from the "Enclosure", an Acadian site in New Brunswick, was received, and their treatment will be completed in the spring of 1994.

The treatment of three ceramic 'Tang horses belonging to the University of British Columbia Museum of Anthropology, Vancouver, B.C., was completed. Treatment began on a multi-component plaster sculpture consisting of a life-size human figure entitled *The Call — Young Soldier*, from the R. Tait McKenzie Memorial Museum in Lanark, Ontario.

Works on Paper Section

Staff of the Works on Paper Section focussed on several interesting projects during 1993-94. The conservation

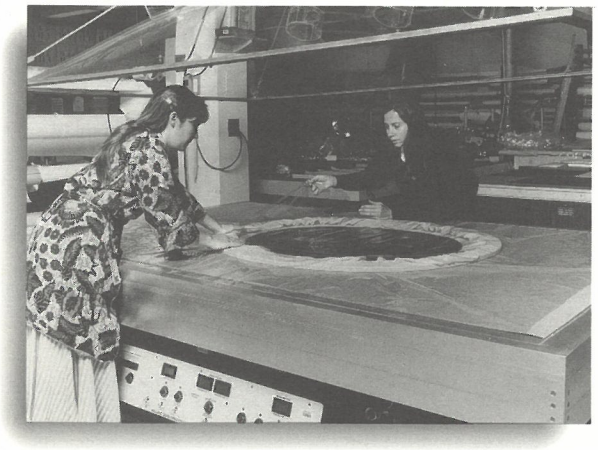
Using humidity to relax the parchment of Treaty No. 8.

Treaty No. 8

In 1899, a treaty party travelled the Athabasca and Peace Rivers, negotiating land cessions with the Aboriginal peoples. A copy of the printed version of the resulting treaty, *Treaty No. 8*, was later sent to each of the Chiefs who had signed in 1899.

The parchment document, now in the collection of the Northern Life Museum and National Exhibition Centre, Fort Smith, N.W.T., arrived at CCI tightly rolled and twisted into a deformed cylindrical shape corresponding to the container in which it had been stored for many years. Conservators used a high humidity process to relax the embrittled parchment and then to meticulously unroll and flatten it. Surface dirt was cleaned from the front and reverse of the document. Unfortunately, because of the fragility of the parchment and the solubility of the printing inks, a large rust stain, probably due to the metal cylinder in which the document had been stored, could not be removed.

To provide the document with extra strength, it was lined onto a new piece of parchment using wheat starch adhesive. New pieces of parchment, coloured to match the original, were made to fill the areas of loss in the original parchment and were secured in place with wheat starch paste. The document was then mounted onto a specially constructed support made from acid-free board and was enclosed in a Plexiglas box for display.



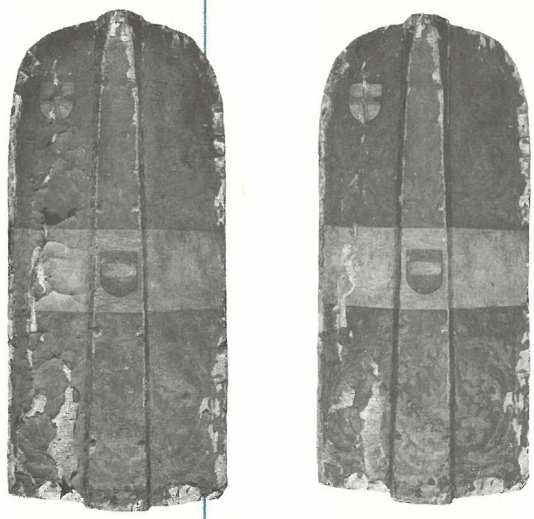
Painting conservators working on a low-pressure suction table.

treatment and rebinding of the *Dutch Language Concordance*, printed on hand-made laid paper in 1615, from the collection of the Mennonite Village Museum in Steinbach, Manitoba, required extensive use of the leaf-casting process. Staff treated 13 etched and engraved plates and an engraved map in a *Portfolio of Etchings* from the collection of the Arctic Institute of North America, University of Calgary, Calgary, Alberta. This *Portfolio of Etchings* recounts the voyage to the Arctic of Commodore Billings and was published in Paris in 1802. The treatment of *Treaty No. 8*, printed on parchment in 1899, from the collection of the Northern Life Museum and National Exhibition Centre, Fort Smith, Northwest Territories, was a particularly rewarding project (see text box).

Fine Arts and Polychromes Section

Over 4,000 hours of treatment work were provided by the Fine Arts and Polychromes Section. Conservation work was completed on the large painting *Martyre de saint André apôtre*, painted in 1821 by the Québécois artist Louis Hubert Triaud. The painting has now been rehung in the historic Church of Saint-André de Kamouraska, Quebec. The treatment of a ship painting, *Portrait of Schooner Mola*, by A. Jacobson in 1902, from the collection of the New Brunswick Museum in Saint John, N.B., was also completed.

A large painting was treated from the Art Gallery of Greater Victoria, Victoria, B.C. Although untitled and anonymous, this painting of a nun receiving communion is identical to one in the Prado, Madrid, Spain, that is attributed to the 17th-century Northern Italian school. The painting had suffered extensive heat damage at some time in its past and required over 1,300 hours of painstaking and intricate conservation work.



The crossbowman's shield before treatment (left) and after treatment (right).

Crossbowman's Shield

The Ethnology Section treated a crossbowman's shield, or "pavis", probably dating from the 16th century. The shield belongs to the Glenbow Museum in Calgary, Alberta.

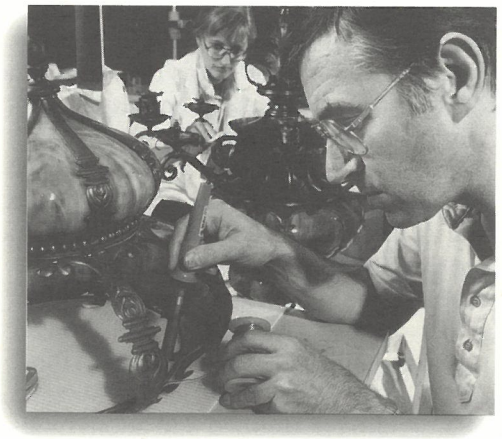
The shield consists of three panels of wood joined by wooden dowels. The front of the shield was covered with canvas and several layers of paint and ground. X-radiography showed that the shield had been painted at least three times, and revealed that at least one of the underlying paint layers had heraldic designs similar to those on the surface of the shield. The object displayed deterioration problems typical of wood, ground, and paint responding in different ways to changing environmental conditions.

After considerable discussion, it was decided that the shield's canvas, ground, and paint layers would be flattened and consolidated but that the missing areas of ground and paint would not be replaced. To flatten the buckled areas and re-adhere them properly, conservators very carefully lifted the buckled canvas with its paint and ground layer away from the underlying wood. This step was perhaps the most technically challenging aspect of the treatment. The paint layer was then flattened using a heated spatula, and adhesive was painted and injected between the canvas layer and the wood. The canvas, ground, and paint layers, once flat, were then carefully pressed back onto the wood using heat and pressure.

Although the shield was treated in the Ethnology Section, considerable assistance was provided by the Fine Arts Section, particularly with respect to lifting the canvas and re-adhering the canvas and paint layers. This kind of interdisciplinary approach is often necessary for many of the technically demanding projects that CCI undertakes.

Furniture and Wooden Objects Section

The past year saw the completion of conservation work on a sewing cabinet belonging to the Hastings County Museum in Belleville, Ontario. A number of long-term projects were also begun. These include the treatment of a painted and gilded mirror frame from the Prince Edward Island Museum and Heritage Foundation, Charlottetown, P.E.I.; a bowfront chest of drawers from Kings Landing Historical Settlement in Fredericton, New Brunswick; and a bookcase and desk from the Bytown Museum in Ottawa, Ontario.



Conservation of chandeliers from Fulford House, Ontario.

Work continued on a melodeon (a small reed organ) that had been badly damaged in a fire at the Billings Estate Museum, Ottawa, Ontario. The melodeon, which presented many difficult challenges, has provided the staff of the Furniture and Wooden Objects Section with opportunities to explore new approaches to the treatment of fire-damaged wood and the replication of simulated wood grain patterns.

Ethnology Section

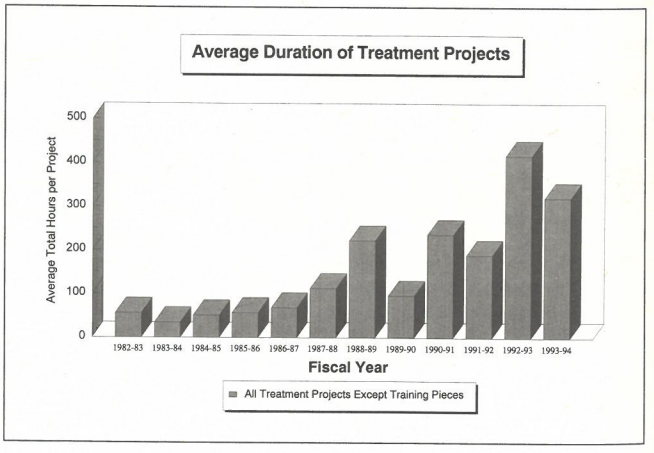
The Ethnology Section worked on diverse objects during the past year. Three chandeliers from Fulford House in Brockville, Ontario, were treated. In collaboration with the Furniture Section, Ethnology staff conserved a badly damaged Mi'kmaq chair seat decorated with porcupine quill work in geometric patterns. Restoration treatment was completed on a Northwest Coast Indian basket belonging to the anthropology collection of the Université de Montréal, Quebec. A leather wall sconce in the shape of decorative fruit was conserved for the Prince Edward Island Museum and Heritage Foundation, Charlottetown, P.E.I.

Two of the most interesting projects completed this past year included the restoration, in collaboration with the Textiles Section, of a badly damaged baby buggy from the collection of the Craig Park and Museum, Parksville, B.C., and the lengthy and technically demanding treatment of a "pavis" (crossbowman's shield) belonging to the Glenbow Museum in Calgary, Alberta (see text box).

Focus on Complex Projects

CCI evaluated the success of its policy to focus increasingly on complex treatment projects. While the complexity of a project is difficult to measure quantitatively, it is reasonable to expect a close relationship between the complexity of a project and the amount of time it takes to complete a treatment. In general, complex projects require more time to complete than routine treatments.

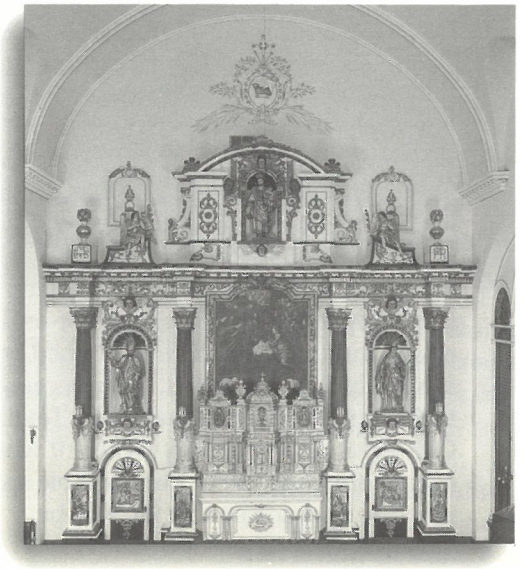
The average duration of treatment projects was determined for each of the last 12 years and was plotted against the year in question. The results, presented graphically on this page, show that treatment projects have, over the years, required increasingly more hours to complete. While the total number of treatment hours provided each year remains basically the same (excluding the last two years), the total number of objects treated has diminished and the total time required to treat each object has increased. Today, treatment projects require on average over 300 hours to complete. Ten years ago, projects took about 50 hours to complete. These data are extremely encouraging in that they show that CCI has been successful in focusing on more complex projects.



Conservation Research

The Canadian Artists' Painting Materials Research Project

The Canadian Artists' Painting Materials Research Project was a major focus in the Analytical Research Services Division. In particular, work concentrated on analyzing samples from a suite of paintings by Paul-Émile Borduas during his Parisian period.



Main retable of the Ursulines Chapel.

Work continued on a study of the materials and techniques of Alfred Pellan, a Priority Conservation Project that was started in September 1992. Twenty-six Pellan paintings from the Musée du Québec and the Musée d'art contemporain de Montréal have been sampled.

Research at the Ursulines Chapel, Quebec City

1993-1994 was the third year of a four-year project, funded under the Priority Conservation Projects Program, to document the materials of the Ursulines Chapel sculpted décor. Analysis of the materials of the Sacré-Coeur retable and the pulpit have been completed, and samples from the main altar and retable will be analyzed. A joint paper with the Centre de conservation du Québec was prepared for the conference "Painted Wood: History and Conservation," to be held in Williamsburg, Virginia, in 1994.

Acid Paper in Library and Archival Holdings

Acid degradation is the most serious conservation problem affecting the majority of paper-based holdings in Canadian libraries and archives. CCI continued its collaboration with the Metro Toronto Chairman's Committee for the Preservation of Documentary Heritage in a long-term project to evaluate three commercial deacidification processes. Having completed the testing of naturally aged and new paper, in 1993 CCI began studying other materials. These included bindings, labels, media, and photographs. Two reports on the progress of this project were written.

In a separate project, CCI is working with the Canadian Council of Archives to investigate the best method for removing acid from paper. In 1993, this work

Dr. Klaus Hendricks and staff were welcomed to CCI.

National Archives Conservation Research Laboratory Joins CCI

In November 1993, the staff of the Conservation Research Laboratory of the National Archives of Canada became part of the Canadian Conservation Institute. This amalgamation makes sense for several reasons. Pooled resources can be used more efficiently — for instance, paper testing equipment can be usefully shared between both laboratories, and CCI's arsenal of analytical equipment can be applied to archival and library problems. In a period of declining resources, it is one way in which the research for the National Archives and the National Library might be preserved.

This merger permits CCI to develop work in several new areas, thereby recognizing the full significance of conservation research for archives and libraries. There are several pressing issues at present that must be addressed, such as the development of standards for permanent paper and the evaluation of mass-deacidification processes. The new CCI staff bring with them considerable abilities as scientists. It is particularly noteworthy that CCI now has much needed expertise in photographic conservation. The merger also allows the initiation of research into the conservation of such non-traditional media as magnetic recording tape, vinyl discs, and compact discs, which are increasingly becoming problems for archives and libraries.

Making a colour measurement of the bronze of the National War Memorial.

concentrated on the effect of varying the washing time of old papers in pure water, and on the effect of using wash water with low concentrations of alkali added.

Textiles Research

There are a number of questions about the effects of aqueous treatments on old textiles. It is possible that washing in pure water (i.e., water with all cations removed) may be actively harmful to the cellulose fibres. To address this problem, a project was initiated in 1993 to assess the long-term effects of washing both old and new cellulosic textiles with pure water and with water that has low concentrations of alkali. An initial analysis of the condition of various textiles was completed in 1993. One aspect of this project was the work carried out to advise conservators in the washing technique to be used for the Gondar Hanging (also see information under "Conservation Treatment").

Washing Table for the Gondar Hanging

Due to its large size and fragile condition, washing the Gondar Hanging presented some unique challenges (also see information under "Conservation Treatment"). In meetings between conservators and scientists, it was decided that a special washing table be constructed for this process. The table had to allow the textile to be washed and rinsed under suction, and had to permit the textile to float so that it could be rinsed thoroughly and be re-aligned before it was blocked and dried. Also, because the table was going to be used in the Textiles Conservation Laboratory (where it would occupy the majority of the available space), it had to be made so that it could be

CCI's Permanent Paper Project team.

Permanent Paper Project

On January 15, 1992, the Government of Canada adopted a policy that permanent paper be used for all government publications that are to be retained. The National Library is responsible for implementing the policy. Since that time, permanent paper has been adopted more and more by book publishers, and the demand for permanent paper has increased significantly. Canadian paper manufacturers who wish to compete in this market believe that their recently developed high-yield pulps have sufficient longevity to be classified as permanent but that they cannot be considered so under the Canadian Standard. This Standard excludes lignin-containing papers, such as those made from high-yield pulps. As a result, Canadian paper manufacturers are pressing for a change in the Canadian Standard.

The Canadian library and archival communities have been advising caution regarding this change because there is insufficient scientific evidence that high-yield pulps are stable. The industrial, research, library, and archival communities, working together under the umbrella of the Canadian General Standards Board technical committee on paper permanence, have planned a three-year research project to answer the question of whether lignin can be permitted in permanent paper. This project is supported by the Canadian Pulp and Paper Association, the Department of Canadian Heritage, Industry Canada, and other interested groups. CCI and Paprican have the only laboratories in Canada with the experience and equipment to conduct the scientific work. Alone, neither has the resources to conduct all the work necessary. A joint project has therefore been developed that splits the work equally between the industrial laboratory (Paprican) and CCI. In 1993, the experimental planning and the arrangements for funding this long-term project were completed.

Dr. Ian MacLeod with staff of CCI and of Parks Canada at Tobermory, Ontario.

disassembled for storage. The washing table was constructed according to the requirements outlined by CCI's textile conservators.

Since the successful washing of the Gondar Hanging, the table has been disassembled and is now in storage. The table, with a working surface of 6 meters by 2.7 meters, is available for loan to any Canadian institution.

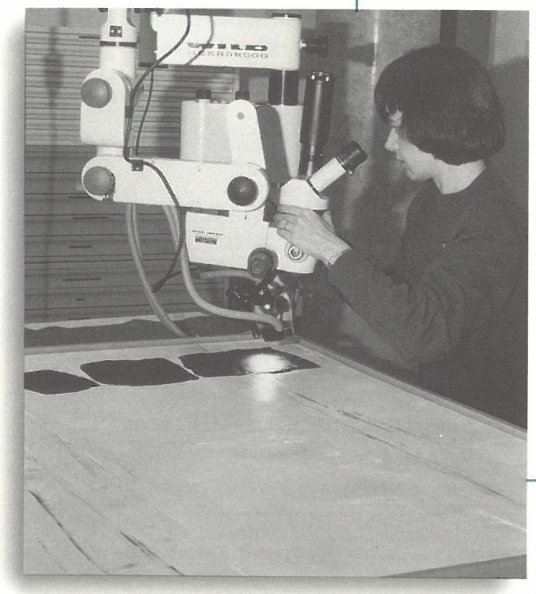
Parliament Hill Bronzes and the National War Memorial

Between 1987 and 1993, CCI acted as an advisor to Public Works Canada for the cleaning and stabilizing of the National War Memorial and the bronze statues on Parliament Hill. Public Works Canada has since requested that CCI measure colour on the treated bronzes to document any changes. This five-year project was started in 1993. Initial results indicate that the colour after conservation matches the original very closely.

Research on Other Metals

In 1993, three studies on the conservation of metal were published. One paper gave results on the stability of over 2,000 iron artifacts that were retrieved from the 16th-century Basque whaling site in Red Bay, Labrador, between 1980 and 1985. These objects had been treated by one of five different conservation methods. A second paper on the cleaning of silver was published. This now completes CCI's work on the topic. The final report on a study of aqueous treatments for objects that contain both waterlogged wood and metal was completed. Two treatments for wood/iron were found to be successful both in preventing corrosion and in preventing shrinkage of the wood.

In the summer of 1993, Parks Canada and CCI jointly sponsored a visit to Ottawa and to Fathom Five National Marine Park at Tobermory, Ontario, by Dr. Ian D. MacLeod from the Western Australian Maritime Museum. Dr. MacLeod



Taking a paint sample from a Borduas painting.

The Canadian Artists' Painting Materials Research Project: Analysis of Paintings by Paul-Émile Borduas

Works from Paul-Émile Borduas's Parisian period, typically large black-and-white paintings, suffer from cracking paint, cleavage, exudations, and incompletely dried paint. Spectroscopic and chromatographic analyses of samples from eight paintings provided valuable insights into Borduas's materials and techniques, which have been of interest to conservators in several Canadian institutions responsible for treating his works.

Using PadCAD and the CCI Cushion Design Calculator.

has used measurements of corrosion potential for assessing the corrosion of metal in shipwrecks in the Indian Ocean. He demonstrated this technique to CCI and Parks Canada staff by taking measurements of the metal on shipwrecks in the fresh water of Lake Huron.

PadCAD: Designing Cushion Support for Packaging Works of Art in Transit

In 1994, CCI released PadCAD, its second software program. This is a bilingual, computerized version of the CCI Cushion Design Calculator, a circular slide rule that was developed as part of CCI's research into the packing and transportation of art objects. The purpose of PadCAD is to assist museum workers in choosing cushioning material for packing art objects. It should be particularly useful for assisting non-specialists in the routine selection of cushioning foams.

The software comes with a short publication that summarizes some of the factors — such as shipping hazards, possible drop heights, object fragility, and cushion design — that should be taken into account when designing packages for transporting art objects.

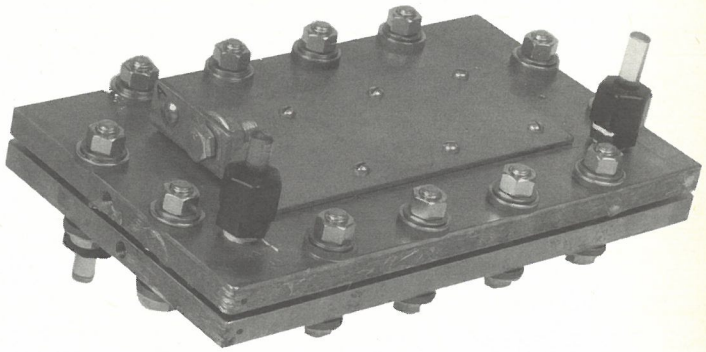
PadCAD and the CCI Cushion Design Calculator are sold through CCI's Extension Services Division. PadCAD runs under MS-DOS environments, and is available on a low-density 3.5" disk.

Oxygen-Free Display and Storage for Artifacts

Many artifacts are susceptible to degradation by oxygen. While it is well understood that objects made of synthetic materials may suffer in this way, it is also likely that the problem is very widespread in museum collections. For instance, delicate ethnographic materials or colorants may also be sensitive to oxidation. One approach to displaying or storing these sensitive objects is to use an oxygen-free environment. The Aquanautics Corporation in the United States has developed a technique for continuously removing oxygen from air by using an electrochemical cell. This cell has the potential to deoxygenate display cases inexpensively and efficiently. In early 1994, CCI started testing a prototype of this device to determine if it could provide acceptable display conditions for sensitive materials. Initial results were very promising and very low oxygen levels were achieved easily.

Handbook for Selecting Plastics Materials in Conservation

Plastics are widely used in conservation for the display and storage of artifacts, but not all are appropriate to this purpose. In 1993, CCI began preparing a handbook to assist conservators and other museum professionals in their selection of appropriate plastics for conservation use. The



Electrochemical cell for continuously removing oxygen from air.

X-radiography of the Equus lambei.

handbook begins with detailed conservation-related information on polymers and polymer science. It then discusses the aging of polymers and the effects of aging polymers on other materials such as museum objects. The remainder of the handbook focuses on categories of manufactured plastic products (e.g, foams, containers). The handbook will be issued in a series of self-contained chapters, similar to *CCI Notes*. The first parts will be ready in 1995-96.

Arsenic and Mercury Compounds in Natural History Specimens

Several museums have asked CCI to survey their natural history collections for the presence of arsenic and mercury compounds. These compounds, which were once used by taxidermists for stabilizing natural history specimens, now pose a health hazard. A Canberra-Packard "Inspector" portable x-ray spectrometer meeting CCI specifications was acquired to allow staff to carry out such surveys when requested.

A New High-Performance Liquid Chromatograph for CCI

CCI's new high-performance liquid chromatograph allows conservation scientists to extend the range of their analytical capability. For example, conservation research scientists can now analyze precisely the composition of natural dyes, and can also determine molecular weight distributions of polymers such as polyethylene glycol and cellulose nitrate. Using this technique, it was found that the dyes used for the Gondar Hanging were unripe buckthorn berries, madder root, weld, and soluble redwood. (For more information about the Gondar Hanging, see sections under "Conservation Treatment" and "Conservation Research".)

Documentation Studies

CCI staff perform examination and recording studies, or documentation studies, of various artifacts. Of particular note this year were the "before treatment" documentation of the Gondar Hanging from the Royal Ontario Museum, and the x-radiography of the remains of a 26,000-year-old horse (*Equus lambei*) that was found in the Yukon in 1993. The horse is being treated for study by scientists at the Canadian Museum of Nature.

Development of the Laser Scanner

In collaboration with the Autonomous Systems Laboratory of the Institute for Information Technology, National Research Council of Canada, development of the laser scanner was carried forward significantly this year. Much progress has been made in the treatment of digital data. For instance, three-dimensional data can now be corrected for various distortions to the reference coordinate system, and multiple views of objects from a database can be now be integrated. A colour correction algorithm to allow for colour matching between different views was also implemented.

A number of experimental objects were scanned, including a plaster replica of a "turtle" petroglyph from Petroglyphs Provincial Park, Ontario, and impressions showing the relief of a painting before and after restoration to evaluate changes in topography. Data processing was carried out on a number of laser scanner image files, including the three-dimensional images of a dried sea urchin treated with Parylene, and copper electrotype replicas of petroglyphs from Kejimkujik National Park, Nova Scotia.

Services to the Museum Community

Approximately 40 percent of staff time is spent responding to requests from clients for scientific assistance and for advice. Activities include analytical services, specialized treatment consultations, and the loan of environmental monitoring equipment.

Scientific and Technical Services

Environmental Control: CCI offers advice on methods of attaining environmental control (i.e., control of temperature, relative humidity, and light) and pest control within buildings, display cases, and storage areas. Twenty-one requests of this nature were received in 1993-94. CCI also received 29 requests for evaluation of UV filters during 1993-94. In addition, CCI surveys collections and museums with pest control problems; three museums used this service in 1993-94 (one survey was undertaken as a cost recovery project).

Environmental Monitoring Equipment Loan Program: CCI runs an environmental monitoring equipment loan program. Canadian cultural institutions can borrow an environmental monitoring kit (consisting of a light meter, an ultraviolet light meter, a hygrometer, and a psychrometer) for a period of three weeks, and can borrow a recording hygrothermograph for periods of up to six months. Other types of equipment are also available for loan, including moisture meters and wood testing devices.

Recently, CCI also began making electronic data loggers available to monitor relative humidity and temperature. These are smaller in size and are more rugged than hygrothermographs. They are read after downloading the information into a computer, and are particularly useful for monitoring objects in transit.

In 1993-94, there were 10 loans of hygrothermographs and data loggers and 40 environmental monitoring kit loans.

Analyses and Examinations: CCI does analyses of paper, pigments, media, varnishes, wood, fibres, metals, corrosion products, and other materials found in objects or paintings. Non-destructive photographic examinations using visible, ultraviolet, and infrared techniques as well as x-radiographic examinations are also undertaken. During 1993-94, CCI fulfilled 174 analytical service requests. Of these, 60 were performed to assist treatment work at CCI, 112 were undertaken at the request of museums in Canada, and two were undertaken for clients elsewhere.

Scientific Examination Services: CCI provides a scientific examination service to assist public institutions and law enforcement agencies with provenance, attribution, dating, or authenticity matters. In 1993, CCI played a key role in the successful prosecution of a case involving fake paintings that were being sold as genuine works of Jean-Paul Riopelle. The case was investigated by the Metropolitan Toronto Police.

Specialized Treatment Consultations: In addition to the more conventional treatment advice available, advice is also provided in a number of specialized areas. These areas include rock art conservation, packing materials, transportation, preventing corrosion and tarnish, cleaning and stabilizing metal surfaces, waterlogged wood, paper, adhesives, suction tables, and Parylene coating. CCI received 48 requests for such information in 1993-94. Thirty-four of these were from staff of museums, libraries, and archives; 10 were from conservators at CCI; and the remaining four were from conservators in other countries.

CCI makes available copies of a computer program known as PEGCON for treatment of waterlogged wood. This is now well known in Canada and has been widely used in other countries. For example, the Archaeological Wood Treatment Centre in York, U.K., uses PEGCON. Requests for copies of PEGCON were received from organizations in Norway and in Israel.

Museum and Site Visits

In addition to visits made as part of CCI's seminar program, a number of other institutions were visited by CCI staff in 1993-94. These are indicated on the map that appears on page 14. Conservation surveys were carried out at the Royal British Columbia Museum and at the Burnaby District Museum

in British Columbia, the Assembly of First Nations Library and Archives in Ottawa, the Memorial University Archive of Folklore and Language in Newfoundland, the Archives of the Sisters of Providence of St. Vincent de Paul in Ontario, the J. Samuel Weir Rare Book Collection in Ontario, the Waba Cottage Museum in Ontario, the National Gallery of Canada in Ottawa, the O'Leary Centennial Museum in Prince Edward Island, Concordia University in Quebec, the McCord Museum in Quebec, the Pelican Project in Quebec, the Art Gallery of Ontario, the Molson Project in Quebec, and the Montreal Botanical Gardens in Quebec.

Seminar participants in Middleton, Nova Scotia.

CCI offers the services of an archaeological conservator on-site to provide assistance during an excavation, the period when artifacts are most vulnerable to deterioration or damage due to the drastic change in their environment. During the last year, conservation assistance was provided at Tasiariluk, a Late Dorset site located on Little Cornwallis Island, N.W.T. The excavation is being carried out by Dr. James Helmer and Dr. Genevieve LeMoine, of the Department of Anthropology, University of Calgary. Approximately 800 artifacts were examined, condition reports and other documentation were prepared, and a selected group of artifacts were packed for transportation. Follow-up services were provided at the University of Calgary. These involved cleaning and stabilizing the organic artifacts, including bone, antler, ivory, and wood. The copper and iron artifacts were taken to CCI, where they were analyzed and where the metal was treated.

Seminars and Workshops

Last year, CCI representatives attended provincial museum association conferences in almost every area of Canada. These association conferences provide an opportunity for CCI staff and museum workers to discuss the content of CCI seminars and to determine whether the seminars are meeting the needs of the museum and art gallery communities in each province and territory.

Again this past year, CCI offered two seminars in preventive conservation to each province and territory (please see map on page 14). Over 340 museum and art gallery workers attended one of CCI's 23 regular seminars and one specialized seminar during 1993-94. A specialized, two-part seminar was developed in response to a particular need from Alberta: "What's New in Old Metals?" and "Update on Adhesive Research". This was directed mainly at the conservators in the province and proved to be very popular.

During the past year, CCI proposed reducing the number of basic seminars offered to each province from two to one and adding two advanced workshops for conservators. This change would allow CCI to direct more of its training efforts towards professional conservators in each province. The proposal was thoroughly discussed with provincial museum association executive directors and training coordinators. Further study and consultation is required before a final decision can be made.

In addition to the regular series of seminars for museum workers, CCI staff presented a number of other significant training events. Among these were a five-day workshop on "Inuit Methods of Skin Preparation," organized by staff of CCI's Ethnology Section and held at the Northern Studies Centre, Churchill, Manitoba. Ten participants from Canada, the United States, England, and Norway took part. A two-day seminar on "Nineteenth-Century Artists' Oil Painting Materials and Techniques" was presented to students in the Fine Arts/Paper Sections of the Queen's University Art Conservation Program in Kingston, Ontario. A week-long furniture conservation workshop was given to students of the Queen's University Art Conservation Program and to students of the Art Conservation Techniques Program at Sir Sandford Fleming College, Peterborough, Ontario. A seminar on "Methods for the Examination and Analysis of Museum Objects" was held for students in the Museology Program at Université Laval.

Furniture conservation workshop at Queen's University.

Staff of CCI's Conservation Research Services Directorate, in conjunction with staff from the Conservation Analytical Laboratory of the Smithsonian Institution in Washington, D.C., presented "Art in Transit" workshops at the Montreal Museum of Fine Arts, Montreal; at the National Gallery of Art, Washington, D.C.; and at the Institute of Fine Arts, New York University Conservation Centre, New York.

Members of CCI's Textiles Section hosted a two-day meeting and workshop to discuss the technical examination and conservation treatment of the Gondar Hanging (for more information, see "Conservation Treatment" and "Conservation Research").

Internships and Fellowships

CCI has a long and proud record in the field of conservation training. From the very early days of regional labs to the mobile conservation laboratories program to the current Conservation Internship and Fellowship Programs, CCI has provided conservation advice, information, and training.

CCI's Conservation Internship Program offers advanced-level training to conservators, conservation scientists, and students of conservation. These practitioners may undertake an internship to update their skills or to work on specific projects at the Institute under the guidance of experienced conservators or conservation scientists. While the primary focus of the program is to provide training opportunities for Canadians, conservation trainees from other countries may also be accepted as space and time permit. A total of 13 interns were accepted during 1993-94, including foreign interns from Germany, Spain, France, and Sweden.

The Conservation Fellowship Program is designed to give further experience to graduates of a conservation or conservation science program. Fellows work in CCI's laboratories and participate in the many services CCI provides to museums, galleries, archives, and other related institutions throughout Canada. Seven fellowships were awarded to conservators and conservation scientists in 1993-94.

Locations of seminars and visits in 1993-94

The CCI Fellowship Program has been running for over eight years and has proven successful in providing development opportunities for conservators and conservation scientists. Nonetheless, CCI Management intends to carry out a thorough review and evaluation of the aims and objectives of this program in the coming fiscal year to ensure that its goals are being met, that it continues to contribute to CCI's overall objectives, and that it is cost-effective and efficient.

Tours and Public Awareness

CCI promotes interest in conservation by hosting tours of its facilities for students of conservation training programs, foreign visitors, and members of the general public. CCI's laboratories and workshops are open to the public by appointment. In 1993-94, CCI welcomed 26 groups comprising approximately 355 visitors. In addition, many individual conservators and other special guests toured the Institute.

Client Service Survey

In order to gain a better understanding of the needs of CCI clients, independent consultants Nicholas Sidor, of Nicholas Sidor Consultant, and David M. Black, Senior Associate of EKOS Research Associates, Inc., were retained to conduct a survey on behalf of CCI. The aim of the survey was to determine, in an unbiased way, if the services offered by CCI were of the quality expected by its clients and if there were ways of improving these services.

A written survey was sent to a wide variety of museum professionals in Canada. A telephone survey was also conducted that included members of the general public and specialists in other fields who had consulted CCI staff for advice.

The survey results showed that clients have high expectations of CCI's ability to provide "state-of-the-art" technical expertise in its conservation treatments and analyses. Clients also expect useful and detailed information about the services CCI offers and the objects sent for treatment at the Institute. The survey indicated that clients expect conservation work to take a long time and understand that schedules can change as work progresses. Clients attach a high importance to being kept well informed about the progress of the work being done on their behalf.

Overall, over 90% of clients were very satisfied with CCI services. CCI scored extremely well on all the technical aspects of the services it provides, and clients rated the positive and helpful attitudes of staff very highly. CCI users were exceptionally positive about how easy it is to obtain help and to apply for treatment services.

Users provided good suggestions for expanding the Institute's services, especially in providing more information, more on-site expertise, and more training through seminars and workshops. Many museum workers, especially those from museums that do not have conservators on staff, said they would like more visits to their institutions so that conservators and scientists could provide advice and conduct conservation surveys of the collections.

A significant minority of clients pointed out weaknesses in CCI's scheduling of treatments and analyses. Some clients felt that CCI should complete its work more quickly, provide more accurate estimates of when work will be finished, and keep clients better informed about the progress of the work.

The survey found few differences in the perceptions of clients who had asked for treatment or for analytical services, those in different jobs, or those from different-sized institutions. Although most clients are themselves museum professionals, who understand that the demand for conservation services far exceeds CCI's capacity to meet it and that this work is often interrupted to handle day-to-day inquiries, they would still appreciate more frequent contact.

CCI staff take considerable pride in the overall results of the survey. Areas of client concerns are being examined with an eye to improving performance and service to the conservation and museum communities.

Library

This year saw the completion of some important projects in the Library, the result of several years of careful planning and hard work.

Special Projects

The Museology Database BMUSE was launched on March 28, 1994. This database provides on-line bibliographic access through the Canadian Heritage Information Network (CHIN) to the collections of the Museological Resource Centre at CCI. Some 35,000 records of the UNESCO-ICOM Information Centre in Paris will be added in 1994-95. Subscribers to CHIN currently have access to the new database, and arrangements will be completed in 1994-95 for subscribers to the Conservation Information Network (CIN) to have access to BMUSE. This new research tool will improve bibliographic research capabilities and will likely increase requests for loans from the Museology Collection. The new databases will require regular updating and long-term maintenance to ensure accuracy and integrity of information.

The in-house catalogue in database format, called SYDNEY, has also been completed and contains 7,000 conservation-related works and 3,000 museology-related works. This database includes all CCI Library material, and is used by CCI staff. The second phase of the CCI Library Automation Project was completed, focussing on acquisitions. All new orders are posted to the SYDNEY catalogue, letting users know the status of their requests.

Integrating the Museology and Conservation Collections in the Library.

The Museology and Conservation Collections have been integrated, resulting in more convenient access to books and periodicals. Duplicate publications were offered to colleges, universities, and conservation organizations.

Reference and Interlibrary Loans

During the year, Library reference staff responded to 1,150 requests for information from the conservation and museum communities and from CCI staff. Requests covered a wide range of topics including conservation of religious sculpture in Canada, reverse glass painting, the impact of tourism on museums, conservation of stamps, cleaning of ancient coins, organizing a museum library, storage of feathers, and restoration of the Rideau Chapel.

There was a marked increase in loans of conservation items across Canada. The Library loaned 840 items to external users. CCI borrowed 560 items from other libraries, and a total of 2,600 items were circulated to CCI staff. The CCI Library was the first library in Ottawa to use the new CD-ROM software ROMULUS, which improves the response time of loan service, to order interlibrary loans on-line.

The Library received visits from 338 researchers from Canada and abroad, including Spain, Australia, England, France, and Germany.

Acquisitions, Cataloguing, and Indexing

The Library acquired 660 new books in 1993-94, catalogued 791 new titles, and indexed 1,400 articles and pamphlets for the museology and conservation databases. A special acquisition of 30 research papers from the Museum Studies Program, University of Toronto, enriched the Museology Collection. The Library also continues to acquire student research papers from the Master of Art Conservation Program of Queen's University.

Publications

Some new CCI publications and products.

As a supplement to its training activities, CCI produces and distributes a wide range of publications. These texts give scientific information and outline basic methods of preventive conservation of use to a broad audience of museum, art gallery, and archives workers, as well as to conservators and conservation scientists. The publications program is a very important part of CCI's efforts to help museum workers help themselves.

A *Publications List*, updated annually and containing an itemized catalogue of all CCI's publications, is sent to over 3,500 addresses on CCI's worldwide mailing list. The *Publications List* continues to grow as new and popular titles are added. In 1993-94, CCI distributed over 143,000 publications.

A total of 22 new or revised *CCI Notes* were published in 1993-94, along with the Technical Bulletin *Working with Polyethylene Foam and Fluted Plastic Sheet*. A highlight of the past year's publication program was the production and distribution of the book *Conservation of Historic and Artistic Works on Paper*. The design and layout of this major publication was done entirely in-house on CCI's desktop publishing equipment.

Canadian Museum Policy

In 1990, the Government of Canada approved a new Canadian Museum Policy. The objectives of this policy are

- to foster access by present and future generations of Canadians to their human, natural, artistic, and scientific heritage and to enhance their awareness, understanding, and enjoyment of the richness of that heritage;

- to encourage the development, management, and preservation of significant and representative museum collections in all regions of Canada; and

- to enhance excellence in museum activities in Canada through support to museological research and development and assuring service throughout Canada.

The Canadian Museum Policy emphasizes the need for the continued development of a comprehensive conservation program for Canada. CCI has participated in implementating the policy through the four main initiatives listed below, for which special funding was provided. Although recent budget cuts have limited the overall impact of these new initiatives, CCI was able to provide assistance in each of these areas during 1993-94.

To support the development of a French-language conservation training program

In 1993-94, the Minister of the Department of Canadian Heritage approved a contribution of $100,000 to support the development of a French-language conservation training program at Université Laval.

To undertake Priority Conservation Projects of national significance throughout Canada

CCI funded a limited number of projects in 1993-94, with a total contribution of approximately $300,000. Because some projects are funded over several years, only a portion of the total funds allocated to the program each year is available for new projects.

One of the projects that received financial support is a four-year undertaking to restore the altar of the Ursulines Chapel in Quebec City. This project, now in its third year, is funded jointly by CCI, the Ministère de la Culture et des

Communications du Québec, and the Musée des Ursulines de Québec.

The complex and time-consuming treatment of polychrome altarpieces in Nova Scotia continued. The final phase of a conservation survey of furniture collections in New Brunswick was completed.

The conservation treatment of the Gondar Hanging, an extremely significant and internationally renowned textile of Ethiopian origin that is owned by the Royal Ontario Museum, was begun. (For more information on the Gondar Hanging, see "Conservation Treatment" and "Conservation Research".) Due to the magnitude of the project, the strict completion deadline, and the large number of other projects underway in CCI's Textiles Section, CCI could not have undertaken this treatment without the support of the Priority Conservation Projects Program. The program has allowed CCI to hire two conservation assistants on term to augment the conservation and scientific team working on the project.

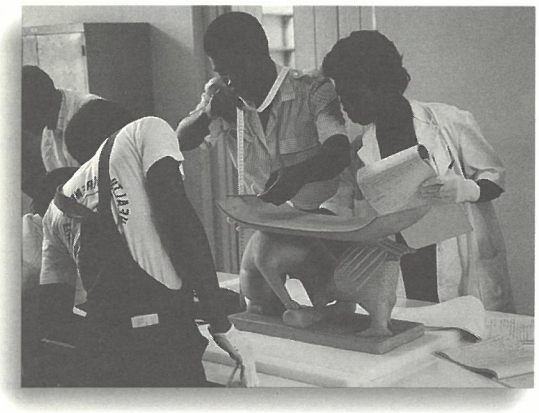
To disseminate conservation information through an enhanced publications program

Several new and revised *CCI Notes* were published, along with a new addition to the *Technical Bulletin* series. The book *Conservation of Historic and Artistic Works on Paper* was published and distributed (see the section under "Publications" for more information). CCI also contributed extensively to the video series on preventive conservation being prepared by the Université du Québec à Montréal and the Centre de conservation du Québec.

To support the operation of CCI's Museological Resource Centre

The Museological Resource Centre added 230 new books to its collection during 1993-94. Work on the automated bibliographic database BMUSE was completed, setting the stage for the launch of this important reference tool in early 1994-95. See the section under "Library" for more information.

International Services



Students at a PREMA workshop on preventive conservation, Jos, Nigeria.

As part of their professional activities, CCI staff attend international conferences and symposia, and occasionally provide services and advice on projects in other countries. In some cases, CCI recovers the cost of these services.

In 1993, CCI received consultation requests from more than 27 countries: 177 from the United States of America, 21 from the United Kingdom, 14 from France, 25 from other European countries, 7 from the Far East, 5 from the Middle East, 2 from South and Central America, and 15 from Australia and New Zealand. These requests covered a wide range of topics such as advice on how to treat a wood specimen from a mineral deposit in Australia that is 10 to 30 million years old; information on polishes for brass onboard a submarine museum in Honolulu, Hawaii; and recommended consolidants for totem poles located outdoors in California.

The following projects represent some of the more important international activities carried out by staff during 1993.

At the International Council of Museums Committee for Conservation (ICOM-CC) conference in Washington, D.C., Debra Daly Hartin presented a paper on the recent results of the Lining Research Project; Lyndsie Selwyn and Judy Logan gave a paper on a comparison of treatment methods related to the stability of treated iron; Stefan Michalski presented a paper on relative humidity and, jointly with Carole Dignard, presented an award-winning

Participants at the International Conference, Dunhuang, China.

poster on the use of the ultrasonic mister for the consolidation of powdery pigments; Malcolm Bilz and David Grattan presented a paper on an apparatus for studying the effects of light exposure on museum artifacts. Staff also presented three papers at the 5th Wet Organic Archaeological Materials (an ICOM Working Group) Conference in Portland, Maine.

Following up on the Art in Transit conference in London, England, in 1991, Paul Marcon and Charlie Costain presented a series of seminars in Washington, Chicago, New York, and Los Angeles, as well as in cities in Canada, on the packing and transportation of paintings.

CCI continues to be involved with the PREMA Project (Conservation Management of the Museums of Sub-Saharan Africa), a training program sponsored by the International Centre for the Study of the Preservation and the Restoration of Cultural Property (ICCROM). Bob Barclay taught at the program in Jos, Nigeria.

Ela Keyserlingk exchanged information and consulted with textile conservators at the Metropolitan Museum in New York about upholstery conservation and about adhesive treatments for textiles.

Leslie Carlyle presented a paper on varnishes and varnishing practices between 1750 and 1858 at the conference "Turner and His Context," which was held at the Tate Gallery in London, England.

Ian Wainwright was invited to present a paper on the analysis of wall painting fragments from Dunhuang, Gansu Province, China, at the International Conference on the Conservation of Grotto Sites, which was held at Dunhuang. He was also invited by the Institute of Culture, Archaeological Museum, to examine rock art sites in Aruba.

David Miller presented the paper "Advances in Gas Chromatography/Mass Spectroscopic Analysis of Artists' Paints and Picture Varnishes" at the Euroanalysis VIII conference in Edinburgh, Scotland.

Réjean Baribeau gave a paper on three-dimensional recording, processing, and display of an artifact collection at the Annual Conference of the Museum Computer Network in Seattle, Washington.

Judy Logan spent eight weeks, from mid-May to mid-July 1993, working as a field conservator in Humeima, a site in Jordan's southern desert. Humeima is a multi-component site with Roman, Nabataean, Byzantine, and Islamic structures, and has been excavated for the last four years under the direction of Dr. John Peter Oleson of the University of Victoria. The most important conservation work involved dealing with delicate fresco fragments.

Tom Daley and David Grattan were invited by the National Institute of Cultural Properties of Japan to visit the Tokyo National Institute, the Nara National Institute, and the Gajoji Institute near Kyoto.

Stefan Michalski gave a paper on the systematic approach to the care of collections in historic buildings at the American Institute for Conservation conference in Denver, Colorado.

CCI had a booth at the Restoration '93 Trade Fair in Boston, Massachusetts,

"Monastery" in Petra, Jordan.

to promote CCI publications and services among members of the international conservation community.

CCI continues to run Internship and Fellowship programs. Please see the section under "Services to the Museum Community" for more information.

CCI staff helped to organize the third Gerry Hedley Memorial Forum, which was held at the National Gallery of Canada on October 22 and 23, 1993. The theme of this international gathering of paintings conservators was "The Mechanical Behaviour of Paintings: Experience and Theory."

Professional Affiliations

CCI represents Canada nationally and internationally on matters relating to the conservation of moveable cultural property. Many staff members devote business and personal time to professional organizations and associations whose mandate is the promotion and advancement of conservation in Canada and abroad.

Charles Gruchy is the Past-Chairperson of the Council of the International Centre for the Study of the Preservation and the Restoration of Cultural Property (ICCROM). He is also a member of the Council and of the Finance and Program Committee.

In preparation for the 15th International Congress of the International Institute for Conservation of Historic and Artistic Works (IIC), to be held in Ottawa in September 1994, John Taylor and Charlie Costain co-chaired the Local Arrangements Committee. Mr. Taylor was also an IIC Councillor in 1993-94. Many CCI staff members led various subcommittees responsible for planning the IIC Congress.

Tom Strang was active with the Society for the Preservation of Natural History Collections (SPNCH) as Associate Editor of its reviewed journal *Collection Forum* and as Co-Chair of the Conservation Research Subcommittee.

Helen Burgess and David Grattan continued to serve on the Editorial Board of the *Art and Archaeology Technical Abstracts* (AATA) as Section Editors.

The Board of Trustees of the Hedley Research Fellowship Fund—Canada included Debra Daly Hartin as Chairperson, Helen MacKay as Treasurer, and Bob Arnold and Stefan Michalski as Trustees.

CCI staff served on many committees of the International Council of Museums (ICOM). The following representatives were active on the ICOM Committee for Conservation (ICOM-CC): Cliff McCawley was Chairperson of the Directory Board, Ela Keyserlingk was Assistant Coordinator of the Textiles Working Group, Tom Daley was Coordinator of the Wet Organic Archaeological Materials Group, Stefan Michalski was Co-coordinator of the Working Group on Preventive Conservation, David Grattan was Coordinator of the Resins Group, and Tom Strang was Assistant Coordinator of the Biodeterioration Working Group. Bob Barclay was Secretary-Treasurer of CIMCIM, the Musical Instruments Committee of ICOM.

As in past years, staff members were involved with the International Institute for Conservation—Canadian Group (IIC-CG). Marie-Claude Corbeil served as Vice-President, Nancy Binnie acted as Secretary, Jean Tétreault held the position of Treasurer, and Helen Burgess was Editor of the *Journal of the IIC-CG*.

Staff were also involved on the Executive Committee of the Canadian Association of Professional Conservators (CAPC). Charlie Costain was Vice-Chairperson, Carole Dignard served as Secretary, and Tom Stone acted as Member-at-Large until June 1993 when Ela Keyserlingk assumed this function.

Helen Burgess was a voting member of the Canadian General Standards Board technical committee on paper permanence.

Judy Logan was a member of the Advisory Council on Underwater Archaeology of the Society for Historical Archaeology.

Administration

The Finance and Administration Directorate supports the Institute by offering financial, human resource, and information management services. This includes informatics, general building services, documentation, and all material management and administrative services.

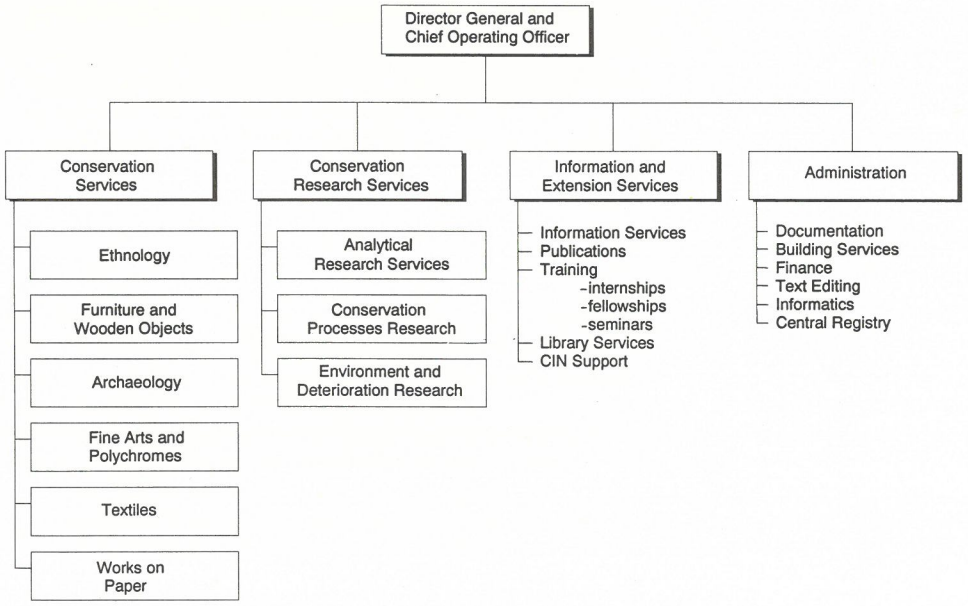
One significant organizational change that CCI has undergone over the last few years is that it became a Special Operating Agency (SOA) and began working under a Single Operating Budget (SOB). In addition, the June 1993 announcement of changes to federal government departments brought CCI under the authority of the new Department of Canadian Heritage. These changes have had a major impact on the Finance and Administration Directorate at CCI. The Institute conducted an internal review this past year to find new ways of adjusting to the changing workplace. The recommendations that resulted and that are being implemented should allow a more efficient and effective delivery of services.

Informatics Activities

The major activity in 1993 was the completion of the Banyan local area network (LAN) within CCI. The network consists of two servers and 91 connections, links all indeterminate CCI staff, and forms part of the Department of Canadian Heritage network.

The introduction of the Banyan e-mail system has simplified information exchange both with departmental headquarters and within CCI. The departmental initiative to have all employees connected to a LAN makes communication simpler and faster, and eliminates the printing and distribution of many paper documents. In practice, it has simplified communications within the Institute.

Organizational Chart of the Canadian Conservation Institute



Financial Statement 1993-1994

Full-Time Equivalents	82.5
Salaries	$ 4,012,712
Operating:	
Postage and Freight	$ 44,535
Communications	$ 55,794
Information and Printing	$ 90,234
Professional and Special Services[1]	$ 663,659
Travel[2]	$ 278,565
Rentals	$ 37,945
Repair and Maintenance	$ 130,557
Utilities, Materials, and Supplies	$ 396,019
Total, Operating	**$ 1,697,308**
Capital:	
Acquisition of Machinery and Equipment	$ 469,675
Contributions:	
Priority Conservation Projects and Canada's Membership Fee to ICCROM	$ 166,788
Total, SOB (Single Operating Budget)	**$ 6,346,483**
Revenue and Cost Recoveries	**$ 25,695**

Note: This is not an audited financial statement.

[1] Professional and Special Services include contractual work, Fellowships in conservation and in conservation research, consulting and advisory contracts, and some Priority Conservation Projects.

[2] Travel includes museum and site visits, conference attendance, professional association business, and travel for training and emergency services.