

# Newsletter

CCI first produced a Newsletter in October 1973. Six issues appeared before it was discontinued in April 1975. In the intervening years CCI has produced many different publications. With its expanding mandate and clientele, there is again a need for an informal vehicle to inform interested readers on what is happening at CCI. The Newsletter is to appear twice a year.

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## From the Director General's Desk

Chuck Gruchy

Happy fifteenth birthday, CCI! Fifteen is not a spectacularly old age, but it is an appropriate time for a long look at what the Institute has accomplished, as well as to consider where it is going.

At an early stage CCI tried to be all things to all museums, and promised to do more than was humanly possible with the resources available. The enthusiasm of youth still remains, albeit tempered with a bit of wisdom. The Institute now knows, and does not hesitate to admit to, its limitations. It has also learned how much the Canadian museum community cares about conservation — there has been a tenfold increase in the number of conservators in Canada since 1972. The Institute immodestly takes some of the credit for that increase.

In addition, CCI has found that the problems at Canadian museums are not too different from those of museums all over the world. A CCI solution to a "Canadian" problem invariably applies in many other countries. Formerly as part of the National Museums Corporation and now as part of Museums and Heritage Policy and Programs Division, Department of Communications, the Institute also discovered that it had accumulated more knowledge of the Canadian museum system than it could ever have on its own.

Most important, perhaps, CCI has found that in the right environment, conservators and conservation scientists can work together to make more important contributions than either group can separately. Two examples

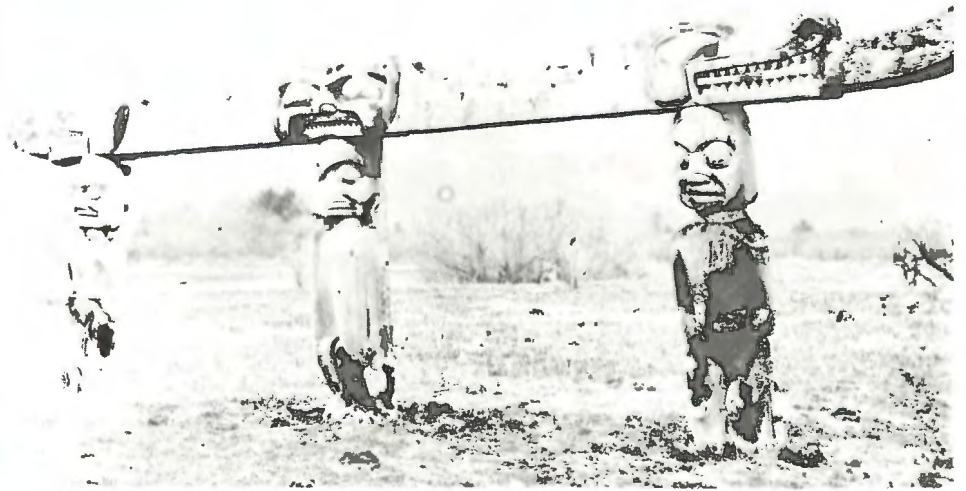


Photo Courtesy of the British Columbia Provincial Museum, PN 6893

The Kwakiutl wooden sculpture treated recently in the Ethnology laboratory as it appeared on site at Tsawadi, British Columbia.

of the products of that kind of symbiotic energy are the synthetic wood filler used on a Sisiutl house complex, and the use of optical filters to view paintings as they would have appeared before their varnish yellowed.

In fifteen years of existence, more than one hundred interns and fellows have passed through CCI, and more than 12,000 objects have been treated. Some of those objects have attained "special" status not only in the minds of the conservators who worked on them but in the public imagination as well. Recently, a unique Malecite Indian costume, Audubon's elephant folios and the Merganser dance costume have made headlines internationally. Not long ago, Louis Riel's diaries, the statue of Justice commonly referred to as "Sally Grant" or the oldest fire engine in Canada were among the notables. The resident CCI Basque whaler enjoys almost as much notoriety as some of his compatriots' clothing, and the Institute's involvement with the Arctic fossil forest promises to be another exciting project.

The Institute's non-destructive analytical techniques are frequently sought out to authenticate the provenance of paintings and objects, often to the dismay of forgers but to the delight of public prosecutors and to the relief of curators. Research carried out at CCI on "rock art" achieved an enviable reputation in this field. That expertise, together with studies on building environments, particularly their humidity, heat and light, has enabled the Institute to assist in the design of a building to house one of the most important petroglyph sites in the country. Many of the things learned about waterlogged wood from various localities will be applicable to studies of two of the most famous shipwrecks in Canada, the *Hamilton* and the *Scourge*.

The Institute's accomplishments have not been restricted to Canada. It has also been active on behalf of museums in Africa and the West Indies, as well as in several international organizations including ICCROM,

ICOM and its various conservation working groups. With the Getty Conservation Institute and the Canadian Heritage Information Network, CCI conceived and gave birth to the Conservation Information Network. The Institute has developed a computerized management system for conservation which is currently receiving its finishing touches — and this time ICARUS will fly.



*Charles G. Gruchy*

In January 1987, Mr. C.G. Gruchy became the fifth Director General of the Canadian Conservation Institute (CCI). A native of Rainy River, Ontario, and married with two children, Chuck Gruchy was formerly Assistant Director, Collections and Research, at the National Museum of Natural Sciences. Educated at the Universities of Toronto and Ottawa, his experience extends beyond his specialization in ichthyology, to invertebrate zoology and the Canada - China Dinosaur Project. He is the author of numerous publications, is an experienced field worker, has represented Canada in several international wildlife organizations and is active in systematics and the protection of endangered species. His long museum career has been distinguished by a practical concern for the care of collections which now finds expression in his direction of the CCI.

The future of CCI is not in any way uncertain despite the negative views expressed by some on the Institute's administrative move from the National Museums Corporation to the Department of Communications as of September 1, 1987. It is unlikely that anyone outside CCI will notice any significant difference; to those inside, it will be a matter of a slightly different bureaucracy. The Institute will continue to deal with the same kinds of problems in conservation; carry on with the same kinds of research; and maintain the same mandate: to provide timely and effective service to the museum community.

Plans are well underway for Symposium 88 on Conservation of Historic and Artistic Works on Paper. The Institute is also about to embark on a cooperative research project on the effects of vibration on paintings in transit. It is already involved in a cooperative research project on the effects of fumigants. Such joint research projects will become more common in the future, especially for large and complex problems. In addition, research on conservation in the natural sciences, the various industrial technologies, and modern materials as used both in fine art and industrial technology will be carried out.

For some time now, CCI has intended to concentrate its efforts on the more complex treatments, allowing the "routine" tasks to become more and more the responsibility of the owner. That goal remains reasonable. As a matter of fact, as other jurisdictions



*A unique Northwest Coast Merganser dance costume after treatment by CCI textile and ethnology conservators.*



*Headress belonging to Malecite costume after treatment by CCI textile conservators.*

are able to hire their own conservators, they will take on as much of the responsibility as their capacity allows. As a result, CCI increasingly will be asked to perform the more complex treatments or those requiring sophisticated equipment. However, CCI will always want to have access to a variety of conservation problems to be able to fulfil its role in training interns and providing a variety of experience to fellows, as well as keep in touch with the everyday problems that confront museums.

In looking at some of the things CCI will be doing in the future, it seems that a fair amount has been added to its plate, but nothing has been taken away. A substantial increase in CCI resources is not expected. The Institute will thus have to explore new ways of doing some of the things it has been doing. Some lectures or

seminars may have to be delivered on videotape, for example. Perhaps some things can be said just as well on posters as in person. The Institute's experience with the "Put it where the sun never shines" poster was certainly excellent.

Nevertheless, it is impossible to keep adding tasks without dropping some from the list. Many of the decisions on the most important CCI priorities will result from consultation, both formal and informal, in Canada and abroad. As stated at the beginning of this note, CCI does not profess to have all the answers. Much of what it has accomplished has been with the advice and assistance of a large number of conservators and curators. The Institute will continue to need that advice and assistance to make its second fifteen years as successful as the first. •

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## Evaluation of Rust Preventatives for the Protection of Rusted Steel Artifacts Exhibited Outdoors

*by Cliff McCawley, Deb Rennie, Robert Barclay and Mark Gilberg*

It is very difficult to prevent corrosion of large steel artifacts exhibited outdoors, such as drainage ditching machines, steam traction engines or farm combines. Commercial products termed "rust converters" or "rust preventatives" claim to act on ferrous metal surfaces that are covered with corrosion products. They chemically transform the existing oxide layer into a stable complex which protects the surface of the metal and inhibits further corrosion. A service request from the Ontario Agricultural Museum has asked CCI to comment on the applicability of two of these products to the conservation of such steel artifacts. This problem was given priority by the Objects Working Group of the Conservation Research Services Section; subsequently it was decided to expand the service request into a full research project.

Eight commercial rust converters were tested: CONQUEST, EXTEND, TRIUMPH 303, NEUTRA-RUST, OAKITE, and three RUST OLEUM products — the 769 primer plus finishing top coat, an epoxy system and the rust converter. Sandblasted mild steel plates were placed outdoors on a rack angled at 45 degrees facing south, to allow them to become covered with a coherent comparative rust coating. The rust preventatives will be applied according to the manufacturer's directions, at which time the following experiments will be conducted:

(1) A long-term outdoor exposure of 5 years' duration, with the plates monitored every 6 months. Test plates will be placed in different geographic locations — in Ontario, the Maritimes and the Prairies — to assess the effects of

various climatic conditions on them;

- (2) An accelerated corrosion test using saline droplets (BS 5466); and
- (3) Experiments to determine if it is possible to measure the electrolytic resistance through the coating. Presumably there will be a marked difference between the resistance of a fresh, uncorroded plate, and one that has been treated with a rust converter. As the coating breaks down, the resistance should approach that of a clean plate.

Some initial results from the accelerated corrosion testing will be available after approximately 18 months. •

## From ICARUS to the Conservation Information Network

by Raymond H. Lafontaine

A few years ago, CCI unveiled its computerized Index of Conservation and Analytical Records Unified System (ICARUS). The system was to store information on conservation treatments, analyses of materials and products, data from research projects, lists of suppliers, and other useful information for conservators. Today some may be asking, Where is ICARUS? The system is alive and well and growing daily, with more than 31,000 records to date. It is also being constantly revised, improved and updated. Parts of ICARUS are now available to museums, art galleries, archives, libraries and related institutions around the world through the Conservation Information Network.

During the first 10 years of its existence, CCI used a manual system to maintain all of its treatment and analytical records. In 1981, a microcomputer-based object registration system was implemented but soon proved inadequate to meet the ever-growing information retrieval needs of both professionals and management. In 1982, CCI opened discussions with the Canadian Heritage Information Network (CHIN), a sibling programme within the National Museums of Canada Corporation, to develop a conservation database that would run on the CHIN mainframe computer. By 1985 a fully operational system was in place.

ICARUS comprises three databases. The Main Database contains information on conservation treatments and examinations, analyses, characterizations, research projects, service requests, consultations, mailing lists, etc. Each record provides technical in-

formation useful to conservators and conservation scientists, as well as administrative information useful to managers.

The second database is known as the XRD/XFS, as it contains data on X-ray diffraction and X-ray fluorescence spectrometry. This information is useful in the characterization of inorganic pigments, corrosion products, minerals, etc. The third was originally the Conservation Materials Database, and was to provide information on the materials and products used in the restoration and conservation of artifacts (for example, adhesives, consolidants and pesticides). Results of research projects carried out at CCI were entered, as well as data extracted from product information sheets, handbooks and the scientific literature.

In 1985, however, the Getty Conservation Institute (GCI) proposed the development of a bibliographic database combining the International Centre for Conservation in Rome (ICCROM) library holdings with the abstracts in *Art and Archaeology Technical Abstracts* (AATA). The ICARUS Conservation Materials Database, which by then contained more than

700 records, would complement such a bibliographic database perfectly. An agreement was reached in April, 1986 by which CCI would contribute its materials database as the basis for the creation of a second database. This agreement ultimately resulted in the creation of the Conservation Information Network, consisting of the bibliographic database (BCIN) and the conservation materials database (MCIN).

Since 1986, CCI and the GCI have restructured MCIN and CCI has added several hundred new records to the database. In addition, BCIN has received the contents of the CCI reprint file, which consists of several thousand articles, the majority of which are not cited in AATA. A CCI thesaurus which had been developed for ICARUS also was provided to the Network, as was the list of conservation materials suppliers.

Over the next year, the structure of the Main Database will be finalized: the development of menus for the system is nearing completion. If all goes well, CCI plans to market ICARUS to Canadian institutions. •



*Anik Morrow from the Fine Arts laboratory consults the Materials Database for information on a product she intends to use for the treatment of a painting.*

CCI will coordinate necessary assistance in case of fire, flood or other emergency involving damage to publicly owned cultural property within 24 hours

Canadian Conservation Institute  
1030 Innes Road  
Ottawa, Ontario  
K1A 0C8  
Tel.: (613) 998-3721

*Emergencies:*  
**24**  
*hour service*

CCI responded to an emergency request for assistance and advice from the Argenteuil Historical Museum in Carillon, Quebec. Conservators provided advice on the removal of plaster dust from artifacts in their collection.

## A Monumental Kwakiutl Sculpture

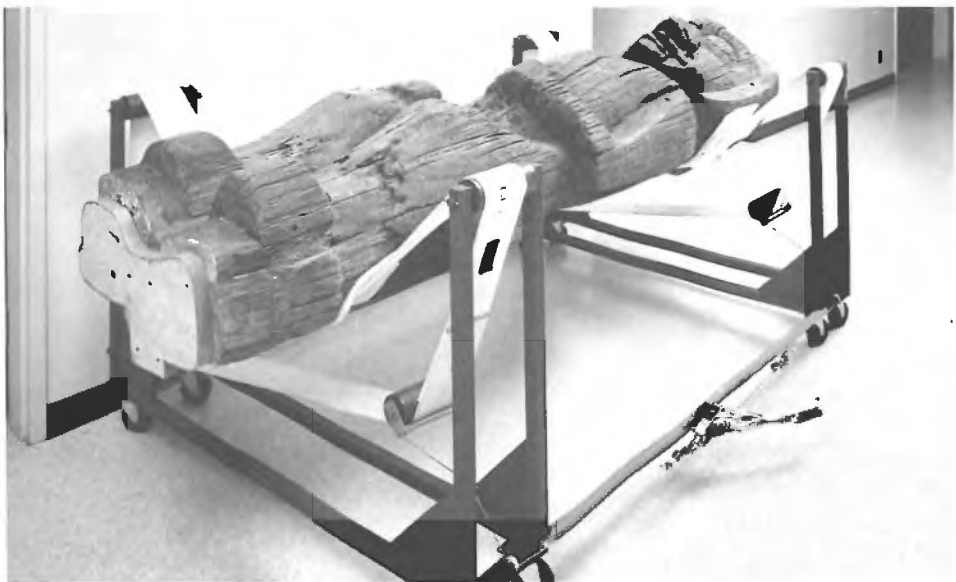
*By R.L. Barclay*

The conservation treatment of a six-part Kwakiutl monumental wood sculpture in the Ethnology laboratory has resulted in the development of several new techniques and materials specifically for such massive artifacts. The initial problem of handling the heavy components of the sculpture during documentation and treatment was solved by the construction of four handling devices — U-shaped frames equipped with flexible nylon slings on rollers. The artifacts were

laid in these slings, which could be adjusted for comfortable working height, or rolled to give access to all sides of the piece. Individual handling device units also could be dynamically connected so that even support was assured along the full length of these objects. The development of these devices made handling during treatment a great deal easier and allowed for precise adjustments of position once the alignment of the components had been carried out.

The large voids in the wooden sculptures had previously been filled with plaster and newspaper. Once this old fill material had been removed it was necessary to devise a benign gap filler which could be easily applied, carved and inpainted. In association with the Conservation Processes Research Section, an epoxy and microballoons putty was developed for this purpose. The material is relatively compressible, easily removed should the need arise, and can be worked and inpainted to replicate the original surface. Fills made with this material have been judged superior to any others currently available.

Aside from the development of specific techniques and materials, these six wood sculptures required extensive routine conservation treatment including consolidation, reworking of some old fills, and reconstruction of large missing areas. The whole assemblage was structurally unsound and required firm bases, close-fitting tenons and dowels between components, and the design of a suitable support system. All this work was done with little compromise to the historical and aesthetic integrity of the sculpture. It now awaits erection in the Grand Hall of the new Canadian Museum of Civilization. •



*The left proper upright of Kwakiutl monumental wood sculpture supported in a specially constructed handling device which allowed precise positioning and alignment of components.*

## "Authenticity" and Analytical Research Services: The CCI Scientific Examination Service

by Marilyn E. Laver

"Is the attribution of this object correct?"

"How old is this artifact?"

"How extensively has it been restored, and when?"

This type of question is often asked by curators contemplating purchases, conservators planning a treatment, police investigating art fraud, and others in museums and galleries across Canada. As it is within CCI expertise to help provide the answers through laboratory analysis and examination, a policy was developed in 1981 to outline the way in which we would meet that responsibility.

The service of "scientific examination" must be requested by a member of a publicly owned institute for an object belonging to the collection, contemplated for purchase, or in some cases, on extended loan to the institution. In order to protect both the owner of the object and the analysts, a legal contract must be signed by the sponsoring institution, the owner of the object (if outside the institution), and CCI. The contract outlines the tests to be done, authorizes sampling if necessary, provides for publication of the results by CCI, and stipulates the details of ownership of the object, payment of costs for its transportation, insurance etc.

One of the most important aspects of the spirit of the contract is buried in a clause which states that the final report "is not a curatorial or artistic opinion as to the nature, quality or authenticity of the object." The scientific examination service is provided to assist curators (and conservators) in interpreting works of art or artifacts, not to replace them in that role. In fact, CCI will not normally engage in a project, for example in a police investigation, unless a curator is involved.

Although provenance is primarily a curatorial responsibility, there is an increasing tendency for conservators to become involved in this area.

Reputable curators often do not have the time to deal with the rising volume of private-sector art "evaluation." Conservators should be aware that such questions can be complex and time-consuming; there may also be legal risks for those who do not normally deal with this type of problem.

The ways in which the laboratory can assist in the examination of an object tend to fall into two areas: the determination of the materials used, and the structure and technique of their use. In paintings, for example, physical features such as pigment palette, type of paint medium and support material are characteristic of certain periods and artists. Complementary information on technique also has a significant bearing on the interpretation of a work — including the use of preparatory underdrawings, design changes by the artist, and the extent of original material remaining after restoration or alteration. Many of the methods used at CCI to gain this

information are non-destructive, requiring no sample; even when sampling is required, the size is microscopic.

Since 1981, more than 30 major scientific examinations have been undertaken at the request of museums and galleries. Four art fraud investigations have been done for Interpol and city police forces. The work has included European and Canadian paintings, ecclesiastical and "Indian trade" silver, Northwest Coast ceremonial objects, archaeological material, rock paintings, Romanesque frescoes, and natural history specimens. In many instances, totally unexpected information was discovered, completely changing the interpretation of the object involved and its place in history. Unfortunately, the number of these projects that can be undertaken is limited, as they generally involve the time-consuming task of assembling and analyzing comparative, well-documented material. However, the successful "unraveling" of a work of art to augment the knowledge on its provenance and history can be one of the most satisfying achievements of the conservation science laboratory. •



*The author using atomic absorption spectrophotometry to determine trace element profiles in artifact studies.*

## Painting Techniques and Restoration

by Colette Naud

"In restoration, one finds only what one seeks, and one seeks only the familiar." This remark by Agnes Ballestrem is meant to encourage the conservator to accumulate as much knowledge as possible on the history of painting techniques.

The restoration of an anonymous sixteenth-century painting entitled "Saint Catherine on the Wheel" (Winnipeg Art Gallery) has confirmed the truth of her observation. Originally, this work was probably part of a polyptych; the companion paintings are now either lost or incorporated into other collections. The painting had been provisionally attributed to the German School, its provincial style making a more accurate attribution difficult. Through research and consultation, we have uncovered several aspects of the physical history of the work which have shed light on its origin.

During examination, several characteristics consistent with the techniques of that period were confirmed: the use of battens nailed to the reverse of the panel, the incised perspective lines, the underdrawing, the stencil marks, the punched gold, the brocade, the glazes, etc. We also found evidence of a change in the shape and dimensions of the painting, as well as of vandalism for religious reasons. Other discoveries were even more significant, however, for our attempts to determine the origin of this painting.

The presence of gypsum in the ground layer links this painting with the southern European schools. One of the noteworthy elements, however, was the wood used to make the panel—pine. This wood had been used for this purpose in several countries, but was one of the woods characteristic of the Spanish School. Another important feature was the layer of raw flax fibre discovered over the front of the panel, between the wood and the

ground layer. This detail is of particular interest since, according to J. Marette, "what distinguishes the Spanish schools from the German ones is the presence or absence of bur-lap over the face of the panels."\*

In order to obtain an outside expert opinion, Mme G. Garrido, head of the *Cabinete de Documentación Técnica* at the Prado Museum was contacted. In her opinion, this painting is Hispano-Flemish work dating from circa 1540. She added that given the various influences evident in the work, it could even belong to the Toledo School.

An article on the restoration of this painting appears in the December issue of the *Annales d'histoire de l'art et d'archéologie* of Brussels University. The publication of data collected during the restoration process is necessary for the progress of research as well as to make comparison and cross-verification possible. The "Saint Catherine on the Wheel" project has produced a set of technical observations which can open up new avenues of research for the art historian. •

\*Marette, J. *Connaissance des primitifs par l'étude du bois du XII<sup>e</sup> au XVI<sup>e</sup> siècle*, edited by A. & J. Picard, Paris, 1961.



"Saint Catherine on the Wheel," Winnipeg Art Gallery. Anonymous, sixteenth century.

## Rock Art Conservation in Petroglyphs Provincial Park

by Ian N.M. Wainwright

Since 1980, CCI has participated in the conservation and recording of one of Canada's best known rock art sites. Known since its rediscovery in 1954 as the "Peterborough Petroglyphs," the site is located near Stony Lake in south-central Ontario at Petroglyphs Provincial Park, where it falls under the care of the Ontario Ministry of Natural Resources (MNR). A collaborative effort by CCI and MNR staff, architects, designers, engineers and builders has resulted in the 1985 completion of a protective structure which has ensured the survival of this unique archaeological site.

In their book, *Sacred Art of the Algonkians*,\* Joan Vastokas and Romas Vastokas of Trent University suggest that the rock carvings are of Algonkian origin from the latter end of the Woodland Period, or about 500-1000 years old. They have enumerated 230 well-defined glyphs but point out that there are hundreds more which are less distinct as a result of weathering or superimposition. The petroglyphs include representations of both natural and mythological figures as well as animals such as snakes, herons, turtles and skinks. The glyphs were pecked or abraded into a slightly undulating outcrop of marble within a roughly rectangular area measuring 22 x 14 meters on a surface inclined at about 10 degrees. In the 1970s, MNR staff became increasingly concerned by a considerable accumulation of rock debris visible on the outcrop and by the apparent increase in unsightly black accretion over much of it. The Institute's assistance was sought in assessing the agents of deterioration affecting the site and in recommending appropriate conservation measures.



The southeast wall is entirely glazed to allow a maximum of sunshine on the marble surface and to make the outcrop partly visible as visitors approach it.

The rock is a typical marble in the Grenville Province of the Canadian Shield. It is very coarse-grained and traversed with graphite veins; as a result it is vulnerable to natural weathering. Periodic monitoring of the site revealed that frost weathering has been the most serious, acute mechanism of deterioration, resulting in widespread cracking and exfoliation. Contrary to initial expectations, acidic precipitation was not found to play a major role in surface dissolution. Theoretical and experimental work indicated that at present pH levels in the region (around pH=4) dissolution of the rock was not occurring to a significantly greater degree than in pre-industrial times (pH=5.6). A significant increase in surface removal rates would only occur at pH=3 or lower.

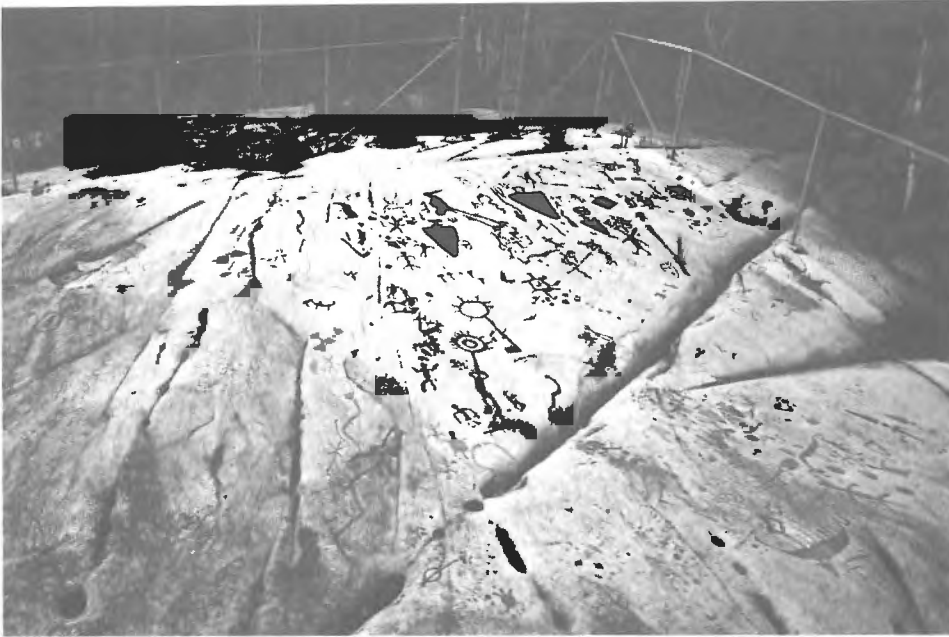
The black accretion resulted from the growth on the site of a green alga, *Chlorococcum* sp. which was present in abundance, as well as several blue-green algae, including *Oscillatoria* sp., *Calothrix* sp., and *Chroococcus* sp. The algae were isolated and cultured; ex-

periments were then conducted to investigate their response to various temperature, relative humidity (RH) and algicide regimes. Prolonged shading of some areas of the outcrop by two red pines on its southern and southeastern sides is thought to have caused the recent proliferation of algae. In addition to discolouring the surface, some algae actively penetrated the marble, allowing even more water access and the promotion of frost weathering.

Vandalism has, fortunately, been minimal at the site because of its comparative isolation and the foresight of MNR in erecting a chain-link fence around the outcrop. From experience at other sites in Canada and abroad it is known that vandalism poses the greatest threat to rock art, and its potential impact had to be taken into account.

In order to prevent frost weathering as well as the conditions favourable to algal growth, and to protect the site from acts of vandalism, CCI recommended that a fully enclosed structure be built over the site. We

\* Vastokas, Joan and Romas Vastokas. *Sacred Art of the Algonkians*. Peterborough: Mansard Press, 1973.



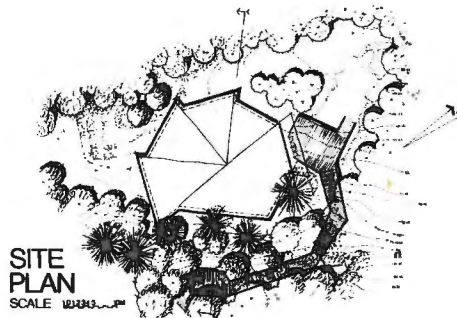
*View of a section of the outcrop at Petroglyphs Provincial Park taken from the southeast before construction of the protective structure. A large heron or crane, the "sun-figure," and a turtle can be seen.*

predicted that without such protection, many of the petroglyphs would not survive beyond about ten years. The structure's primary function would be to eliminate rain, snow, and surface run-off while permitting a maximum of sunshine on the rock surface to keep it dry. It was also of the utmost importance that the structure detract as little as possible from the appearance of the site, reflect its spiritual ambience, and maintain, to the greatest possible extent, the harmonious relationship between the site and its surroundings. It was equally important that visitors, including the disabled, be able to enjoy the site and have unobstructed views of it.

These challenges were met by the Toronto architectural firm of Klein and Sears (latterly Sears and Russell) to whom MNR awarded the contract for a feasibility study and subsequent design. Construction was by Maple Engineering and Construction Canada Limited of Brampton, Ontario. Prior to construction, the overall site was recorded stereophotogrammetrically by

Heritage Recording Services, Environment Canada, Parks. A truck-mounted hydraulic lift ("cherry-picker") was used to position the camera along two flight lines. The outcrop was also recorded with a large-format (8" x 10") camera. Several glyphs were also photographed at night by means of oblique electronic flash illumination.

The structure is a seven-sided, column-free, fully enclosed building approximately 12 metres in height.



*Site plan of the protective structure showing the approach walkway, the seven-sided column-free design, and the orientation of the trusses.*

The walls are fully glazed and the roof is insulated to in excess of R30. A promenade around the site, as well as the structural foundations, are of poured concrete, reinforced as necessary. The steel superstructure was fabricated in sections and erected on the site, which was temporarily covered during construction. A mechanical system consisting of six air intake louvres with motorized dampers, an exhaust fan at the roof high point, and ceiling fans, ensures visitor comfort on hot summer days. Conservation of the rock surface depends, however, only on passive solar heating and natural air circulation to prevent excessive RH levels.

The main truss spans in a northerly direction, parallel to deep fissures in the outcrop arising from glacial action. All secondary trusses join together over a large "sun-figure" glyph which is believed to be of particular significance. The roof is asymmetrical, forming a peak at the south, a feature which assists with ventilation. A catwalk was incorporated near the roof to facilitate further recording and study of the glyphs. The expansive south wall allows for maximum solar penetration and also enables visitors to glimpse the outcrop as they approach the site along a pathway from that side. The glazed walls provide good visual contact with the surrounding woods, while the interior walkway and a raised observatory platform in the east corner provide excellent views of all the petroglyphs.

The MNR is currently planning a Visitors' Centre to assist in interpreting the site for the public. The Centre will include an explanation of the conservation and recording of the site, as well as the design of the protective structure among its programs. Experiments are also underway to determine the best method of selectively cleaning the marble to remove the algal accretion and wax crayon, which was used in the past to emphasize the glyphs. •

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## The Conservation of Waterlogged Wood Thirty Million Years Old

by David Grattan

Three thousand eight hundred kilometres to the north of Ottawa, on Axel Heiberg Island in the most northerly party of Canada's High Arctic Islands, lie the remains of a 30-million-year-old forest. In that distant era the area was covered with forests dominated by the Dawn Redwood or *Metasequoia* (a close relative of the Californian Redwood).

In the summer of 1986 it was found that not only were there intact stumps, trunks and branches but that the wood seemed not to be permineralized. It was still much like wood and thus not really fossilized. Further study revealed the existence of an intact forest floor with the leaves of several species clearly preserved and seeds and cones scattered throughout. All of this material was organic in nature. This unique and wonderful state of preservation poses a severe conservation problem. Excavated wood behaves much like waterlogged wood. It quickly dries out, warps, cracks and shrinks. The leaves remain visible for little more than an hour or two before drying out and disintegrating.

I was invited to assist the National Museum of Natural Sciences in its 1987 field season on the site, and as a result spent two weeks there in July. The principal aims were to examine the environment and to select materials for conservation study. Thus, wood samples and fairly hefty sections of leaf mat were removed by a specially devised technique. A moisture survey with a conventional moisture meter soon revealed that all the buried wood, whether above or below the permafrost, was completely waterlogged. This discovery was quite surprising since precipitation in the region is light, and the area resembles a desert! Another activity was to show that by use of plastic sheeting and brushing on water, stumps could be excavated, examined and reburied without cracking.



*The author measuring the drying rate of an ancient tree stump excavated in the high Arctic in 1986.*

Meanwhile, back in the laboratory, Samantha Drouin, a summer student in the Conservation Processes Research Section, was conducting an analysis of the wood which was designed to help select possible conservation procedures. A section of stump removed by the 1986 expedition was subjected to chemical analysis. We also determined some of the properties of the wood.

It seemed incredible at the time, but the wood was found to contain less than 1% ash. It proved to be composed of about 70% lignin and 28% holocellulose. Infrared spectrum analyses taken by Scott Williams, Analytical Research Services Section, showed few differences between these components and modern material. The wood strongly resembles typical waterlogged wood from wet archaeological land sites in its composition. It also shrinks and expands with relative humidity change, much like modern wood — hence the drying problems. It has, however, been compressed a great deal; we estimate that an eightfold reduction in volume has taken place as a result of deep burial.

The next step is to conduct some trial treatments. Naturally we plan to adopt procedures devised for waterlogged wood. After they have been completed, a much greater challenge

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## Analytical Reports on Commercial Products

by Elizabeth A. Moffatt

More than four hundred commercial products considered for use in conservation have been analyzed by the Analytical Research Services Section. Analysis was usually undertaken to answer a specific question posed by a conservator, such as the identification of the major constituents of a product or the presence of potentially harmful components. Consequently, the results are not necessarily comprehensive. Studies to determine the long-term ageing characteristics of a product or its suitability for a particular application were not undertaken as part of the analysis. Where possible, general comments were made on the chemical stability of components. These analyses were performed over a ten-year period. Note: *The formulation of proprietary products may be modified without a change in the product designation.*

An index listing the products in alphabetical order and by category is available on request. As of July 1987, 430 products have been analyzed. Standardized report summaries, generated from the ICARUS database, will soon be available to replace the photocopies of the original reports which are presently circulated. To obtain a list of available reports, please contact the author at the Analytical Research Services Section. Copies of up to ten reports will be sent on receipt of a request. If more are required, a loaner set will be made available so that the reports of interest may be copied. •

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is posed by the leaf material. There is great interest in attempting to preserve leaf litter for both laboratory study and public display. If the attempt succeeds, this ancient but incredibly well-preserved material holds the potential for a truly stunning exhibit. •

# The Cross from Ferryland

by Judith A. Logan

The site of Ferryland, 80 kilometres south of St. John's, Newfoundland, represents one of the oldest continuously occupied English settlements in Canada.\* Established in 1621 on behalf of George Calvert (later the first Lord Baltimore), the Colony of Avalon survived despite the harsh climate of Newfoundland and the Dutch attack of 1673.

In the fall of 1985, during test excavations of the site under the direction of Dr. James A. Tuck from Memorial University of Newfoundland, a forge was uncovered that dated to the time of the founding of Calvert's colony. Among the many fragments of

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\*Tuck James A. "A Glimpse in the Colony of Avalon." *Archaeology in Newfoundland and Labrador, 1985, Annual Report No. 6*. Jane Sproule Thomson and Callum Thomson, editors. Newfoundland Museum, Historic Resources Division, Department of Culture.



Object covered by a slag-like deposit (before cleaning).

ceramic and heavily corroded pieces of iron encrusted in the floor of the forge was an unusual object, covered with rocks and a bubbly, slag-like deposit. Upon examination, this was identified as a cross; however the rocks cemented in the layers of corrosion obscured details of the surface. Dr. Tuck brought the cross to CCI for preliminary examination and advice on how to remove the rocks and corrosion.

Initial tests by the author uncovered two tiny spots of yellow metal which were identified at the Analytical Research Services Section as gold and brass. Radiography of the object, taken at two different exposures, revealed a completely mineralized finial, four open-work iron orbs which appeared to be plated, and three plated bands wrapped around a socketed shaft. The bright line that appears around the middle of the iron bands forming the four orbs is brass inlay, possibly the settings for semi-precious stones. Over most of the surface, the gold plating is extremely thin and has been damaged by corrosion and subsequent distortion of the original surface of the iron. Radiography also revealed several deep cracks running both horizontally and vertically through the mineralized object. Chemical examination of the slag-like corrosion layers indicated that they were composed of iron silicates.

Although now covered with disfiguring corrosion, it is not difficult to visualize the cross as it once was — probably mounted on the end of a wooden shaft, bright with gold and brass, possibly with semi-precious stones set in the brass inlays encircling the orbs. What the archaeologists have yet to determine is the significance of the cross to the site: where and when it was made; what religious denomination it represented; and why it was discarded in the refuse of a forge.

In terms of conservation, the cross presents a variety of interesting problems: the insoluble and extremely hard deposit of silicates on the surface; the highly mineralized and fragile remains of wrought iron; a very thin and discontinuous layer of gold plating; and the presence of brass, which would be damaged by most treatments for chloride removal and stabilization of iron. Conservation treatment will consist of removing as much of the surface deposit as possible by means of airbrasive techniques, after which the plating revealed during cleaning will be analyzed again. The silicate layer can never be removed completely, nor the salts entrapped in or under this layer. Washing to remove as much chloride as is readily soluble will be done with de-ionized water; design of a storage-display case incorporating silica gel to reduce relative humidity to a minimum will be fundamental to the long-term survival of this unique object. •



Radiograph of the cross.

## Two Eighteenth-century "Glass Prints"

by David Tremain

The Paper Laboratory recently received two framed prints from the Ross Memorial Museum, St. Andrews, New Brunswick. Examination revealed that the process by which they were executed was an interesting variant of mezzotint known in the eighteenth century as "back-painting on glass."

The discovery of mezzotint was first announced in 1642 by the German soldier Ludwig von Siegen, an officer in the service of the Landgrave of Hesse-Cassel, but its "invention" is attributed to Prince Rupert of the Rhine, cousin to Charles II of England. Charles confided the information to English diarist John Evelyn, who subsequently published the information in *Sculptura* [1662].

Mezzotint had reached its peak in England and Dublin by the eighteenth century, when it was primarily used for the reproduction of portrait paintings.

The prints in our care are by the English mezzotint engraver Thomas Burford, about whom little is known, except that he reproduced portraits after Philips and Schoack, executed landscapes and hunting scenes, and exhibited at the Society of Artists in London during the latter part of his career. The prints are entitled *April* and *December*, part of a set of twelve, and depict three-quarter length oval portraits of ladies.

The process consisted of soaking the print thoroughly before attaching it to a sheet of glass. While the paper was still damp, it was carefully rubbed away until only the layer of ink was left, although a thin layer of paper sometimes remained. Once dry, the back of the print was coated with two or three applications of mastic varnish to make it transparent, after which it was hand-coloured with watercolour. This process differs from *hinterglasmalerei*, where the

design is painted directly onto glass.

The condition of these prints presents a number of problems for the conservator. What remains of the paper is very brittle, and in places is separating from the glass; the glass is broken and the varnish has yellowed. Their treatment also poses certain ethical considerations. The glass cannot be removed because it is an integral part of each print; so is the varnish. If it were possible to remove these and replace them with new materials, the integrity of the artifacts would be lost.

There appears to be little information available on the treatment of such prints. It would seem that the best approach might be to repair the glass, consolidate the paper, re-attach areas that have separated from the glass, and insert a stable support in the frame behind each one. •



December, Thomas Burford (c. 1710-1770).  
Reverse-glass print (verso), 1745.  
42.1 x 31.5 cm

April, Thomas Burford (c. 1710-1770).  
Reverse-glass print (recto) 1745.  
42.1 x 31.5 cm

## The Volatiles Testing Programme

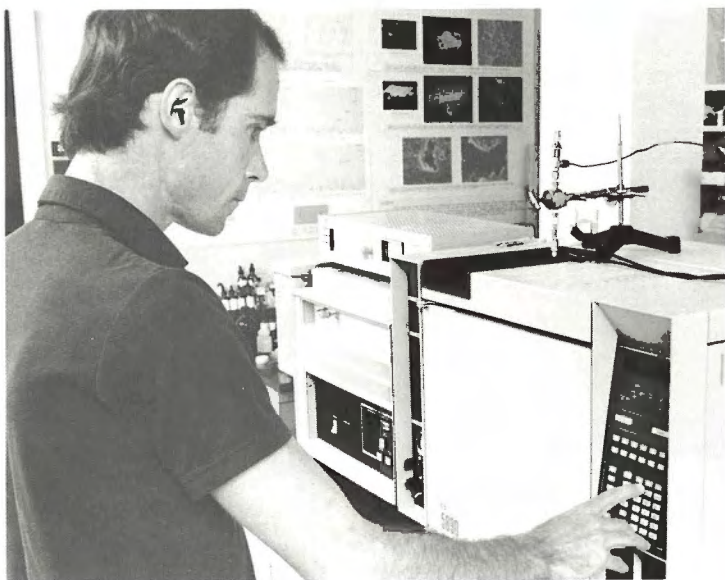
by Mark Boyle

The Institute is studying the emission of vapours from elements of display, storage and support materials and is investigating the effect of these vapours on artifacts. Wood products and other cellulose, paints and adhesives, plastics, foams and other formulated materials may all exhibit off-gassing to some extent. In the confines of a closed display case or storage cabinet, potentially damaging vapours such as formic or acetic acid, formaldehyde and other low-boiling reactive substances may accumulate to levels deleterious to sensitive artifacts. Metals are particularly sensitive to oxidative attack, although textiles and photographs also show some susceptibility, possibly at higher concentrations of the volatile gases.

To reduce the threat to preservation, a testing programme is being developed to identify commercial products which are suitable for use near artifacts. Natural ageing of a test material is carried out in a closed vessel under ambient conditions; accumulated vapours are then swept through a scavenging sample tube. The thermal desorption of trapped vapours from the tube, followed by capillary chromatographic analysis coupled with mass selective detection, allows unambiguous identifica-

tion of vapours thus collected. The ability to identify undesirable volatiles from a given material allows recommendations to be made on that material's suitability for use near artifacts. Similarly, viable non-threatening alternatives to a questionable test piece (i.e. the use of non-emissive soft woods over some acid-generating hardwoods such as oak) may also be identified. Concurrently, coupons of polished metal are being sealed in vessels with the samples which are being tested for volatile release. Lead, silver and copper are typically sensitive to the levels of volatiles found under some display conditions; it is expected, therefore, that these tests will reveal the concentration levels at which tarnishing, efflorescence and corrosion occur.

Where aesthetic concerns preclude the elimination of all potentially emissive materials, acid-indicating dosimeters or polished lead coupons allow a qualitative check of the threat posed by a given product or display system. Future investigations into the efficiency of different vapour scavengers, such as activated charcoal or silica gel, on controlling the accumulation of volatiles are also anticipated. •



*The author operating a gas chromatograph unit with mass selective detection to characterize vapour emissions.*

## WANTED: Information on Titanium Dioxide White

by Marilyn E. Laver

The National Gallery of Art in Washington is compiling a book entitled *Artists' Pigments: A Handbook of Their History and Characteristics*, for publication in 1988. In order to assemble a comprehensive chapter on the titanium dioxide white pigments and their use by artists, I would like to ask you to search your memory to answer the following three questions. First, have you noted any examples of these pigments in a dated work of art (painting, print, watercolour, painted glass, ceramic, artifact made of painted wood or metal, etc.)? Second, do you know where there might be a twentieth-century paint box, from which a really small sample might not be missed (in the collection in your care, or in an attic perhaps)? And lastly, have you had cause to suspect that the presence of titanium dioxide white pigments might have accelerated deterioration in specific areas of a work of art?

The major gaps in the information gathered to date are in these three areas: assistance with any of them would represent a very important contribution to the project. The chapter will also include such topics as the pigment's history, properties, composition (and its chronology) and identification methods. If you have any relevant material, please contact the author at the Analytical Research Services Section.

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## A Major International Event

You are invited to attend a symposium sponsored by the Canadian Conservation Institute. It will be held in Ottawa, Canada from October 3 to October 7, 1988 and will include original papers on the care and preservation of historic and artistic works on paper. The following topics relevant to the concerns of the conservator, scientist, curator, or archivist will be emphasized in formal presentations and poster sessions: case histories, conservation treatments, materials, and artists' techniques. The proceedings of this



Conservation of Historic and Artistic Works on Paper

# Symposium 88

Conservation des oeuvres historiques et artistiques sur papier

symposium will include tours of conservation facilities in the National Capital Region and demonstrations of conservation materials and techniques.

Abstracts (of approximately 200 words) for formal presentations or poster sessions are invited. The deadline for receipt is March 31, 1988.

More information and registration forms are available from the Organizing Committee of Symposium 88. Please write to the Canadian Conservation Institute at the address below.

Canadian Conservation Institute  
1030 Innes Road  
Ottawa, CANADA K1A 0C8

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## A Sixteenth-century Basque Costume

by Charlotte Newton and Eva Burnham

In the summer of 1986 a complete set of clothing was recovered from a waterlogged burial at the sixteenth-century Spanish Basque whaling station at Red Bay, Labrador. This is the most complete costume to have been recovered from the site to date. It is particularly important historically because there is little known about everyday clothing of the period and few examples have survived.

The costume consists of a knitted hat, long-sleeved jacket and shirt, knee breeches, stockings and shoes. About one-third of the costume was damaged by the pressure of large rocks which were placed on the body. The burial environment was wet and acidic, favouring the survival of wool and leather, but not of cellulose fibres such as linen or cotton. Because of the shallowness of the burial, there was little preservation of the human remains.

The conservation of the costume is being carried out as a joint project between the Archaeology and Textile laboratories.

Fibre analysis carried out by Gregory Young, Analytical Research Services

Section, indicated that the clothing was made of wool, with the hat and stockings being of a finer grade of wool than the rest of the costume. At the request of archaeologist James Tuck, dye analysis was undertaken by Penelope Walton, a specialist in the analysis of archaeological textiles in York, England. No dyes were found to be present, but natural pigmentation of the fibres indicated that the original colours of the costume were light, medium, and dark brown, red-brown and natural white.

Extensive mechanical and wet cleaning were carried out to remove rootlets and adhering dirt, after which the

textile was dried in the freeze dryer. After additional cleaning, weave analysis, fabrication of a pattern and mounting for display will be carried out. Eventually, this project will likely lead to a full reproduction of the costume as an aid in interpretation.

The excavation is funded by the Province of Newfoundland and Labrador, and directed by Dr. James Tuck of Memorial University of Newfoundland. Conservation support, both on site and in the laboratory, has been provided by the Canadian Conservation Institute (CCI) since 1978. •



Costume after preliminary cleaning



## CCI Library: New Acquisitions

Brachert, Thomas. *Patina: von Nutzen und Nachteil der Restaurierung*. Munchen: Callwey, [1985].

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*Cleaning stone and masonry: a symposium sponsored by ASTM Committee E-6 on Performance of Building Constructions*, Louisville, Kentucky, April 18, 1983, James R. Clifton, editor. Philadelphia, Pennsylvania: ASTM, c. 1986.

*The conservation of archaeological materials: a laboratory manual for prehistoric and historic collections*, edited by Charles H. Fairbanks. Contributors: Sharon Bolt... [et al.] Gainesville, Florida: University of Florida Anthropology Student Association, 1983.

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*The conservation of cultural property: a basic reference shelflist*, National Institute for the Conservation of Cultural Property. Washington, D.C.: Smithsonian Institution, [1985].

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Crespo, Carmen. *The preservation and restoration of paper records and books: a RAMP study with guidelines*, prepared by Carmen Crespo and Vicente Vinas [for the] General Information Programme and UNISIST. Paris: Unesco, 1984.

*Decorative wood: the proceedings of the Symposium held at the Burel Collection*, Glasgow, U.K. March 31, 1984, edited by Deborah Carthy and Colin McWilliam. [Glasgow]: Scottish Society for Conservation and Restoration, 1984.

de Guichen, Gael. *Climat dans le musée: mesure / Climate in museums: measurement*, 2<sup>e</sup> éd., rév. et augm. Rome: ICCROM, 1984.

Masschelein-Kleiner, Liliane. *Ancient binding media, varnishes and adhesives*, translated by Janet Bridgland, Sue Walston, and A.E. Werner. Rome: ICCROM, 1985.

*Materials degradation caused by acid rain*, Robert Baboian, editor. Developed from a symposium sponsored by the Division of Industrial and Engineering Chemistry, Inc. at the 20th State-of-the-Art Symposium of the American Chemical Society, Arlington, Virginia, June 17-19, 1985. Washington, D.C.: The Society, 1986.

Mattsson, Irene. *Bilden räddas: tillvaratagande och restaurering av äldre fotomaterial / Rescuing Pictures: the care and restoration of early photographic material*. Stockholm: Nordiska museet, 1985.

*Preservation and presentation of rock art 1981-1983*. [2nd ed.] [Paris?: Unesco, 1984?].

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Rosing, Jens. *The sky hangs low*, original text and drawings by Jens Rosing; translated from the Danish by Naomi Jackson Groves. Moonbeam, Ont.: Penumbra Press, [1986].

Rossi-Manaresi, Raffaella. *Restauri a Bologna e Ferrara / Conservation works in Bologna and Ferrara*. Bologna: Fondazione Internazionale Cesare Gnudi, 1986.

Sandwith, Hermione and Sheila Stainton, compilers. *The National Trust Manual of Housekeeping*. London: A. Lane [in association with the National Trust], 1984.

*Scientific examination of easel paintings: art history and laboratory*, edited by Roger Van Schoute and Hlne Verougstraete-Marcq. Strasbourg: Conseil de l'Europe, 1986.

Skaar, Christien. *Water in wood*. Ann Arbor, Michigan: Out-of-Print Books on Demand, University Microfilms International, 1987.

*Third Specialist Seminar on TL and ESR Dating: Helsingor (Elsinore), Denmark, July 26-31, 1982: [proceedings]*. Strasbourg: Council of Europe, Parliamentary Assembly, 1983.

Thomson, Garry. *The museum environment*, 2nd ed. London, Boston: Butterworths, in association with the International Institute for Conservation of Historic and Artistic Works, 1986.

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*Watercolours: towards mutual understanding between curator, client, chemist and conservator*. Worcestershire, England: Institute of Paper Conservation, 1985. •

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## CCI Services: Seminars, Lectures, Workshops and Visits

To respond to specific needs within the museum community, CCI offers, in cooperation with regional and provincial museum and art gallery associations, a comprehensive series of workshops, seminars and lectures related to the conservation and care of museum and art gallery collections. CCI staff also participate and present lectures to meetings of professional groups and associations. A list of 1987 CCI-sponsored events to date follows.

### January 1987

"Fine Arts Conservation"

Debra Daly

York University, Toronto, Ontario.

"Care, Handling and Storage of Mixed Collections"

Judy Logan

Alberta Museums Association,  
Lethbridge, Alberta.

### February 1987

"Care of Textiles"

Eva Burnham

Ottawa Quilters' Guild,  
Ottawa, Ontario.

"Care of Collections"

Sandra Loughheed

Ontario Museums Association  
Annual Meeting, Toronto, Ontario.

"Disaster Planning for Small Museums"

David Tremain and Sherry Guild

Association Museums New  
Brunswick, Inc., Fredericton, New  
Brunswick.

At the request of Indian and Northern Affairs Canada, Philip Ward visited Gitsegukla, British Columbia, to discuss proposals to restore two totem poles with the Hereditary Chiefs. Poles at Kispiox, Kitwanga and Kitwacool were also examined as a prelude to a future field trip. This trip will be featured in a coming Newsletter.

### March 1987

"Conservation of Embroidery"

Chris Paulocik

Ottawa Valley Guild of Stitchery,

St. John's Anglican Church, Ottawa.

"Preventive Conservation for Libraries"

David Tremain

Ontario Library Service, Ottawa  
Public Library, Ottawa, Ontario.

"Care, Handling and Storage of Mixed Collections"

Judy Logan and Chris Paulocik

Association of Manitoba Museums,  
Brandon, Manitoba.

Philip Ward attended a meeting of the Getty Conservation Institute Disaster Planning Steering Committee at the National Academy of Sciences, Washington, D.C.

### April 1987

"Basic Care of Archaeological Materials"

Judy Logan

British Columbia Museums  
Association, Vancouver,  
British Columbia.

"Care of Archival Collections and Books"

Dave Hanington and Sherry Guild

Alberta Museums Association,  
Edmonton, Alberta.

"Damage to Museum Objects by Visible and U.V. Radiation"

Stefan Michalski

Conference on Lighting in Museums,  
Galleries, and Historic Houses,  
Bristol, England.

"Stable Materials for Storage, Display and Packing"

Scott Williams

Thinking Things Through: Problem  
Solving in the Care and Handling of  
Museum Collections, Seminar,  
Oberlin, Ohio.

### May 1987

"Basic Care, Handling and Storage of Mixed Collections"

Chris Paulocik and Helen McKay

Federation of Nova Scotian Heritage,  
Halifax, Nova Scotia.

"Two-Week Course on Care of Ethnographic Materials"

Bob Barclay

International Centre for Conservation  
in Rome (ICCROM), Italy.

"Environment and the Small Museum: Light, Temperature and Relative Humidity"

Paul Marcon and Mark Boyle

Community Heritage Foundation of  
Prince Edward Island, Rustico, Prince  
Edward Island.

"The Museum Environment"

Paul Marcon and Mark Boyle

Canadian Museums Association,  
Distance Education Course  
Charlottetown, Prince Edward Island

"Observations of the Structure and Deterioration of Rock Art Sites in Canada"

Ian Wainwright

Society for American Archaeology,  
Toronto, Ontario

"Conservation Philosophy for Administrators"

Philip Ward

Association Museums New  
Brunswick Annual Conference,  
Doaktown, New Brunswick.

"Murphy Was An Optimist: Concerning Cultural Disasters"

Philip Ward

George Stout Memorial Lecture,  
American Institute for Conservation  
Annual Meeting, Vancouver, British  
Columbia.

Philip Ward attended the Canadian Museums Association Meeting in Winnipeg where he carried out various duties as Chairman of the Committee of Fellows.

### June 1987

"Care of Archival Collections and Books"

Dave Hanington and Sherry Guild

Association of Manitoba Museums,  
Winnipeg, Manitoba.

Visits were made to two local museums, the Chesterville and

District Historical Society (Sue Maltby and Amanda Gray) and the Historical Society of Argenteuil's museum in Carillon, Quebec (Valerie Dorge and Amanda Gray). Basic preventive conservation techniques and advice were presented to museum staff and volunteers.

"Basic Care, Handling and Storage of Mixed Collections"

Helen McKay and Chris Paulocik  
Saskatchewan Museum Association,  
Saskatoon, Saskatchewan.

#### August 1987

Examination of excavations and basic on-site conservation advice.

Charlotte Newton and Lynn Grant  
Ste Marie II Site, Christian Island,  
Ontario.

Collections Survey.

Debra Daly and Anik Morrow  
The Lindsay Gallery, Lindsay,  
Ontario.

#### September 1987

Cliff McCawley and David Grattan, Coordinators of the ICOM Conservation Committee, Metals Working Group and Group for Wet Organic Archaeological Materials, attended a special joint meeting of these two groups at the Western Australian Maritime Museum, Fremantle, Western Australia.

Several staff members (Debra Daly, Valerie Dorge, Jane Down, Chuck Gruchy, David Grattan, Maureen MacDonald, Cliff McCawley) attended the Eighth Triennial Meeting of the ICOM Committee for Conservation which was held in Sydney, Australia, September 6-11. During the week, CCI contributed six papers and supplied the Chairperson for three Working Group sessions. Jane Down also provided practical demonstrations of the Conservation Information Network. Cliff McCawley was elected to the Directory Board of this Committee, and made Treasurer.

"Closing a Seasonal Museum for the Winter"

Mary Peever and Sue Maltby

Gladstone Town Hall, Gladstone,  
Manitoba.

"Care of Books and Archival Materials"

Dave Hanington and  
Wanda McWilliams  
Timmins Museum, Timmins, Ontario.

"Workshop on Applications of the Vacuum Suction Table for Paper and Textiles Conservators"

Stefan Michalski  
Glenbow Museum, Calgary, Alberta.

"Closing a Seasonal Museum for the Winter"

Mary Peever and Sue Maltby  
Indian Head Museum, Indian Head,  
Saskatchewan.

#### October 1987

"Care and Cleaning of Metal Objects"

Bob Barclay and Charlotte Newton  
West Point Light House, West Point,  
Prince Edward Island.

"Closing a Seasonal Museum for the Winter"

Mary Peever and Sue Maltby  
Maritime Museum, Halifax, Nova  
Scotia.

"Seminar and Collections Survey for Museums and Galleries in the Yukon"  
Ela Keyserlingk, David Tremain and  
Tom Stone  
Dawson City and Whitehorse, Yukon.

"Basic Care of Textiles Seminar"

Eva Burnham  
Sault Ste. Marie Museum, Sault Ste  
Marie, Ontario.

Visits to museums and galleries in Alberta for basic conservation, advice and follow-up on previous Mobile Laboratory visits.

Dave Hanington and Amanda Gray

"Conservation of Archaeological Organic Materials" (intermediate to advanced level)

Judy Logan and Charlotte Newton  
University of British Columbia  
Museum of Anthropology,  
Vancouver, British Columbia.

Stefan Michalski was invited by the Cuban Institute for Conservation, Restoration, and Museology to present a series of lectures in Havana over a

period of two weeks on environmental control, and also to establish a liaison between their institute and CCI. The visit was funded by a UNESCO grant.

Ian Wainwright gave a lecture, "Experiments in the Photographic Recording of Rock Paintings and Petroglyphs" and John Taylor delivered another, "Applications of a Laser Scanner to the Recording and Replication of Museum Objects," to the Cultural Resource Recording Symposium organized by the Recording and Documentation Committee of ICOMOS Canada in Toronto.

Philip Ward attended the British Columbia Museums Association Annual Conference at Kimberly, British Columbia.

Joe Dorning and Sandra Lougheed attended the Ontario Museum Association Annual Conference at Toronto, Ontario.

Dave Hanington and Joe Dorning attended the Alberta Museums Association Annual Conference at Lethbridge, Alberta.

During September and October, Chuck Gruchy participated in dinosaur fossil excavations in the Gobi Desert as part of the field work of an international scientific, cultural and museological collaboration of the Ex Terra Foundation (Edmonton, Alberta), the Tyrrell Museum of Palaeontology (Drumheller, Alberta), the National Museum of Natural Sciences (Ottawa) and the Institute of Vertebrate Palaeontology and Palaeoanthropology (Beijing). Chuck has played a major role in all aspects of the negotiations between these partners who are exploring relationships between dinosaur remains in China and Canada and finding interesting similarities. The project, which is one of the largest of its kind to take place in this century, will culminate, in several years, in a major international travelling exhibit on dinosaurs. •

## Comings and Goings

Chuck Gruchy was appointed Director General of CCI in January 1987. He comes to CCI from the National Museum of Natural Sciences where he was Assistant Director, Collections and Research.

Wally Kozar, formerly Director General of CCI, assumed the position of Acting Assistant Secretary General, Corporate Services, National Museums of Canada, where he is helping with the transition of staff and services between NMC National Programmes, of which CCI was a part, to the Department of Communications.

Ann Marie Sahagian successfully completed the three months Career Assignment Programme (CAP) at Touraine, Quebec and is presently on a twelve-month work assignment with the National Archives of Canada as Assistant Director, Accommodation Services.

Joe Dorning, formerly Assistant Director, Administration, with the Museum Assistance Programme of National Museums of Canada, assumed the position of Chief, Training and Information, in September, 1987.

Sandra Webster-Cook left CCI in May 1987 and is now conservator of paintings at the Art Gallery of Ontario in Toronto.

Caroline Tom, a consultant, worked in Environment and Deterioration Research on the Conservation Information Network, particularly the Materials Database.

From the Chemistry Department at the University of Toronto, Samantha Drouin, as part of the Career-

Oriented Summer Employment Program, worked in Conservation Processes Research Section on the 30-million year old wood from the Arctic.

Mark Gilberg left CCI in June and is now at the Australian Museum in Sydney. Mark will continue the research he started at CCI on ethnographic materials. Presently he is working on a pest control programme for the museum.

Carl Schlichting joined CCI in August as a member of staff of the Ethnology laboratory. He was previously Chief of Conservation at the Historic Site Service, Alberta Culture.

Henri Benoît, of the Public Affairs Directorate, Public Service Commission, has joined CCI as Publications Production Coordinator in Training and Information Division.

John Dawson, Conservation Scientist with Environment and Deterioration Research, has left CCI to study medicine at the University of Ottawa.

Dr. Lyndsie S. Selwyn joined the Conservation Processes Research Section in November. Lyndsie comes to CCI with considerable experience in the physics and chemistry of materials, having just completed three years as a Research Associate in Solid State Chemistry at the National Research Council of Canada.

Sandra Loughheed left CCI's Ethnological laboratory to join the Ontario Ministry of Citizenship and Culture. •

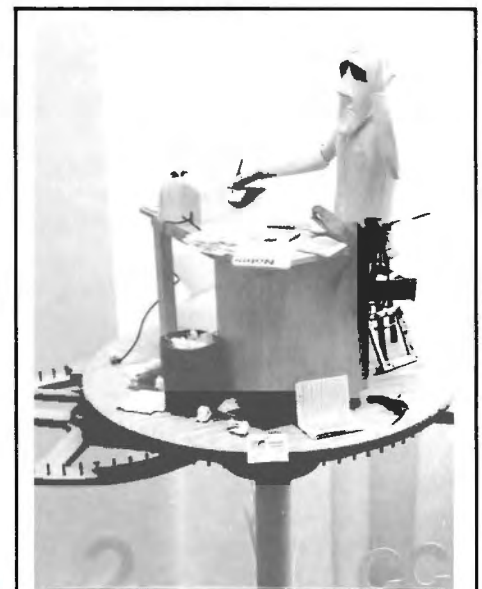
## CCI Conservation Fellowship Programme

As a continuation of the Internship Programme associated with its Mobile Laboratory Programme, CCI has, as a further service to the museum community in Canada, offered selected individuals the opportunity to acquire additional training and experience for up to two years through its Fellowship Programme.

The following individuals were selected for the CCI Conservation Fellowship Programme:

Carole Dignard (Ethnology)  
Lynn Grant (Archaeology)  
Amanda Gray (Fine Arts and Polychromes)  
Wanda McWilliams (Works on Paper)  
Anik Morrow (Fine Arts and Polychromes)  
Laura Nagora (Furniture and Wooden Objects)

In cooperation with the National Gallery of Canada, Anita Henry (Fine Arts and Polychromes) was selected for a special on-site project at the Gallery. •



The CCI fifteenth anniversary weather vane.

Primary design: Carl Schlichting  
Execution: Bob Barclay, Carl Schlichting, Sue Maltby, Carole Dignard, Phil White

Communications  
Canada

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