Canadian Conservation Institute

From the Director

Many of our readers – directors, curators, professors, specialists, or technicians – working in the museums field in Canada or elsewhere, will have heard of the existence of the Canadian Conservation Institute. We have now had our first birthday and take this opportunity to communicate information on conservation and research programs in various stages of development, staff members and their responsibilities, and activities both in the Ottawa headquarters and in the regional centres. In future issues of the Newsletter the content will broaden out to include short readable technical notes on conservation problems and on subjects of museological importance. The Canadian Conservation Institute has a national responsibility for conservation of collections in the fields of fine arts, archaeology, ethnology, and history and to carry out relevant research, training and information functions. The present staff, still growing, has been brought together from many countries and constitute a magnificent team of conservation and scientific specialists.

Through the vehicle of our Newsletter and subsequent publications you will get to meet our colleagues. The person in charge of these publications is our chief of Scientific Documentation Dr. Rosamond Harley. As Editor she will be pleased to have your comments on content or other matters.

Accompanying the Newsletter is a questionnaire (for Canadian readers only) which we hope you will take the time to study and fill out. My staff and I will then be in a better position to evaluate the work required in the various areas; conservation, research, and training, and thereby establish realistic priorities.

N. STOLOW

C.C.I. Activities

The organization of a complex national operation has taken up much time within the Institute's temporary headquarters, selecting equipment and very often putting it into storage on delivery. However, new arrivals on the staff cannot be put into storage, and, so far, they have been accommodated in what seems to be ever-shrinking space. We are far from reaching our full complement on the staff, but since there has been an adequate nucleus of conservators and plans have been sufficiently well-advanced, a major activity for the conservators has been the regional surveys.

The object of these surveys is to assess the needs of various areas with regard to conservation of artistic and historic works; and, by estimating in man hours, the amount of work that will be required to meet these needs, to decide on the number of conservators that will be required to staff the regional conservation laboratories attached to C.C.I. In this way, we hope to ensure that regional centres of the Institute are staffed with a suitable number of conservators with relevant skills in particular fields of conservation, and so provide a service that is tailored to meet the requirements of the region in which it is located. Needless to say, it is only in the field, visiting a variety of institutions, that our conservators can discover exactly what will be required in the future.

The first survey took place April 30 – May 11 in the Atlantic Region; the team of conservators was led by Mr. U. Dix and comprised Messrs. Roche, von Imhoff, Holm and Byers. All are specialists who, between them, cover fine arts, artistic and historic works on paper, polychromes, decorative arts, archaeology and ethnology. Complete coverage of all institutions was not possible in the time, so, assisted by museum curators on the Atlantic Region Advisory Committee, a selection of sixteen was made, choosing those that have important or typical collections. Prior to each visit, a letter was sent to each museum requesting them to prepare information and also select items of importance for inspection. In painting and polychrome sculpture, an attempt was made to examine every item in any institution, but sheer bulk of material made this impossible in the fields of ethnology, archaeology and historical materials. In these cases, representative samples were examined and a written report made on their condition and conservation work required. In many cases photographs were also taken.

In addition, an environmental study of each building was made; temperature and humidity readings were taken and observations were made concerning illumination, fire precautions, storage facilities and the building in general. Apart from the survey of sixteen institutions, an advisory visit was made to the Provincial Archives of New Brunswick following the flood in Fredericton.

On completion of the survey, a report was drawn up and presented to the Atlantic Regional Advisory Committee, members of which travelled to C.C.I. Headquarters for a two-day meeting. The total estimated requirement for conservation work in the area was 1,173 man-years, a very large proportion of which is needed for rare books, manuscripts, maps and other historic works on paper. It was recommended that some items should be treated at C.C.I. headquarters, but the majority will be treated at the Regional Centre when it is set up. In the meantime, the Advisory Committee will recommend priorities for the work. Another conclusion to be drawn was that there is a need for infor-

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mation sheets on conservation for distribution to the museums and this will be undertaken by C.C.I.

While the conservators were drawing up their report, preparatory work went on for the next journey to the Pacific region. On this occasion, however, the "Progress in Conservation" exhibition, that has already been seen in Ottawa, was dispatched to the Vancouver Art Gallery where two rooms were devoted to the display that shows techniques used in conserving individual works of art, sections portraying deterioration problems, techniques and materials of the artist, modern methods of examining works of art, processes employed in conservation and restoration, methods of transporting cultural works, and problems of fraudulent artifacts. Dr. Stolow delivered a lecture in conjunction with the exhibition at the commencement of the survey during the second week in June.

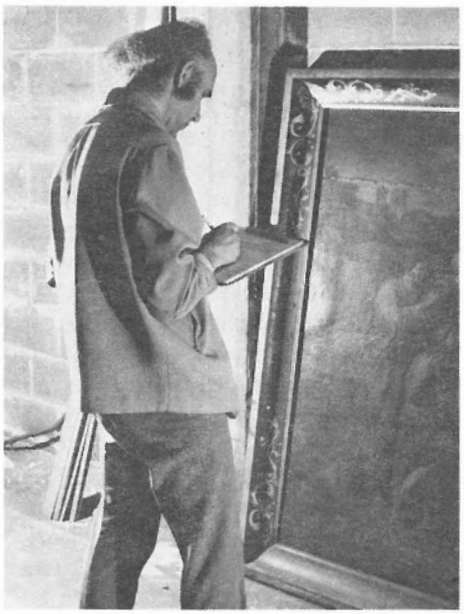
The Pacific Region survey was once again led by Mr. Dix, accompanied by Messrs. Roche, von Imhoff, Holm, Rogers, Bosshard and Meese. Mr. Roche was assisted in the examination of works on paper by Miss Jean Webster who works at the Vancouver Archives.

The purposes and pattern of this survey are identical with those of the Atlantic survey, although on this occasion the survey is to continue for about four weeks. The first part of the time was spent in Vancouver with visits to the Art Gallery, the Archives, the Centennial and Martime Museums and collections at the University of British Columbia and Simon Fraser University. The following week was spent in Victoria at the B.C. Provincial Museum, Provincial Archives and the Victoria Art Gallery. At the time of writing, most of the team are proceeding on a tour, visiting institutions in Princeton, Kelowna, Vernon and Kamloops, althought Mr. Holm, conservator in ethnology, is making a separate tour of interior sites containing West Coast Indian objects and artifacts as well as some archaeological digs.

As with the previous survey, not only a general report will be produced, but also a full, confidential report concerning their own institution will be prepared for each one that co-operated with C.C.I. on the survey. Once again, conservation needs will be estimated in man-years followed by an estimate of the number of staff that will be required in the Pacific Region Conservation Centre.

It will be some time before permanent premises are occupied (various sites were viewed during the tour). The interim accommodation is established in Vancouver, and it should not be long before a nucleus of C.C.I. staff will be at work on planning and commencing on urgent conservation priorities, as determined by the survey report.

R. D. HARLEY



Mr. U. Dix examining a painting in storage at the Centennial Museum, Vancouver

M. U. Dix examinant un tableau entreposé au Musée du centenaire à Vancouver

Personnel at C.C.I.

This list includes biographical details of professional staff who are already working at C.C.I. Headquarters in Ottawa or who will arrive during August. Other appointments have been made, and we shall include information about new arrivals in future issues.

Dr. N. Stolow, *Director* – Studied chemistry at McGill and Toronto Universities, B.Sc. 1949 and M.A. 1952, then specialized in the application of chemistry to the conservation of works of art at the Courtauld Institute of Art, University of London, Ph.D. 1956. Joined the National Gallery in 1957, serving as Director of the Gallery's National Conservation Research Laboratory 1963–72. He is a Fellow of the International Institute for Conservation, has published many papers and completed numerous consultations with organizations such as Unesco.

Dr. D.K. Sebera, *Assistant-Director, Conservation Research Programs* – Received Ph.B. in liberal arts and science, 1949, and Ph.D. in physical and inorganic chemistry, 1958, both at the University of Chicago. Professor of Chemistry Wesleyan University 1958–70, Professor of Conservation Science Cooperstown graduate programs, State University of New York 1970–73. He also spent some time at the National Conservation Research Laboratory, National Gallery, and in addition to having wide teaching experience, he has published *Electronic Structure and Chemical Bonding,* 1965, and also many papers.

Dr. J.F. Hanlan, *Chief, Analytical Research Services* – Studied at the Universities of Alberta and Berkeley, California, obtaining Ph.D. in physical chemistry, 1961. Before coming to C.C.I., he was a research chemist with the central laboratory of Du Pont of Canada. He has research experience in several types of spectroscopy and in organic-metallic chemistry.

Mr. J.M. Taylor, *Research Chemist, Analytical Research Services* – Studied at Ryerson Polytechnical Institute, Toronto, worked at Du Pont of Canada Research Centre 1965–67, then studied chemistry at Michigan Technological University, B.S. 1969 and M.S. 1971. Worked as a chemist at the National Conservation Research Laboratory 1971–72. He specializes in x-ray diffraction, spectroscopy and macroprobe analysis.

Mr. R. Myers, *Chemist, Analytical Research Services* – Studied engineering at Queen's University receiving his B.Sc. degree in 1972. His work with C.C.I. since joining in May of that year has dealt with the applications of energy dispersive x-ray and scanning electron microscopy to conservation and restoration problems.

Dr. K.J. Macleod, *Chief, Environment and Deterioration Research* – Received B.Sc. degree in chemistry at Queen's University in 1955 and Ph.D. in physical chemistry at Toronto University in 1959. He has previously worked for the Aluminium Co. of Canada as research chemist, section head, on thermodynamic and kinetic research, and he has strong interests in Canadiana, archaeology and ethnology.

Mr. G. de W. Rogers, *Research Chemist, Environment and Deterioration Re-*

search – Obtained B.Sc. degree at Carleton University and worked at the National Conservation Research Laboratory 1965–72. In addition to work as a research chemist, he has lectured at Community College and C.C.I. seminars and also worked as co-designer on the Progress in Conservation exhibition.

Mr. R.H. Lafontaine, *Chemist, Environment anl Deterioration Research* – Studied chemistry at the University of Ottawa, receiving a B.Sc. degree in 1972. He joined C.C.I. the same year and has been working with pyrolysis-gas chromatography.

Mr. P.C. Marriner, *Consultant, Exhibition Conservation Research* – B.Eng., 1966, at Nova Scotia Technical College, M.Eng., 1970, at the Royal Military College, Kingston. He is a professional engineer of the Province of Ontario, served as lecturer in mechanical engineering at the Royal Military College, 1967–70, and subsequently worked in maintenance engineering in the Canadian Forces until joining C.C.I. in August 1973. His interests lie in the design and maintenance of special environments.

Mr. U. Dix, *Consultant Conservator, Fine Arts* – Trained at the Doerner Institute and worked as restorer of paintings at Bristol City Art Gallery in the U.K., then as conservator of paintings at the National Gallery of Canada 1965–73. He is a Fellow of the International Institute for Conservation, has considerable training experience and many publications, including a translation of Wehlte's work on painting technique.

Mr. E. Bosshard, *Conservator, Fine Arts* – Studied at the Technical College, Zurich, and trained in conservation at the Swiss Institute for Art Research, Zurich, and at the Central Research Laboratory for Objects of Art and Science, Amsterdam. Formerly deputy-restorer of paintings at the Rijksmuseum, Amsterdam, 1971–73.

Mr. R. Roche, *Consultant Conservator, Artistic and Historic Works on Paper* – Studied art history and fine arts in Paris and trained in conservation with various European institutions. Formerly chief conservator, Conservation Laboratory, National Library and Public Archives of Canada 1966–73. He is a Fellow of the International Institute for Conservation, Chairman of the Canadian Association of Professional Art Conservators, has lectured at Carleton University, Algonquin College and various seminars and has published many papers.

Mr. H.C. von Imhoff, *Consultant Conservator, Polychromes and Decorative Arts* – Studied fine arts in Basel and history of art at the University of Basel, followed by four years' training in conservation at Kunstmuseum, Basel, with additional training at Instituto Centrale del Restauro, Rome, also in Florence and Switzerland. Formerly chief conservator, polychromes, paintings and murals at the Swiss National Museum Zurich. He is co-ordinator of a working group of ICOM Conservation Committee, has training and research experience and publications on conservation.

Mr. S.A. Meese, *Conservator, Polychromes* – Trained in fine arts at Cambridge College of Arts and Technology and in conservation at Gateshead Technical College 1966–69, Stuttgart 1969–70, Zurich 1970–71, and Brussels 1971–72. He has taken part in conservation work at Westminster Abbey and also has training experience.

Mrs. R. Levenson, *Conservator, Sculpture and Decorative Arts* – Received B.A. degree at Wellesley and worked as assistant conservator at the Fogg Art Museum, Harvard University, 1969–73. She has knowledge of art history and scientific subjects and experience in conservation of a variety of artistic objects.

Mr. P. Guldbeck, *Consultant Conservator, Ethnology* – Studied anthropology at the University of Denver, B.A. 1949 and M.A. 1950. Previously employed as chief curator at the Museum of International Folk Art, 1950–57, professor of graduate studies at S.U.N.Y., Cooperstown; he has also worked for the New York State Historical Association and as a consultant to the New York State Council on the Arts and the American Association for State and Local History. He is author of a monograph *Leather, Its Understanding and Care,* 1969, and *The Care of Historical Collections,* 1972, and is a Fellow of the International Institute for Conservation.

Mr. S.J. Holm, *Conservator, Ethnology* – Studied at the University of Copenhagen and at the Institute of Archaeology, University of London. Formerly consultant to the Ministry of Antiquities, Libya, and assistant conservator at the National Museum of Denmark, 1970–73. He has considerable experience in Scandinavian conservation projects together with a wide knowledge of ethnology and archaeology.

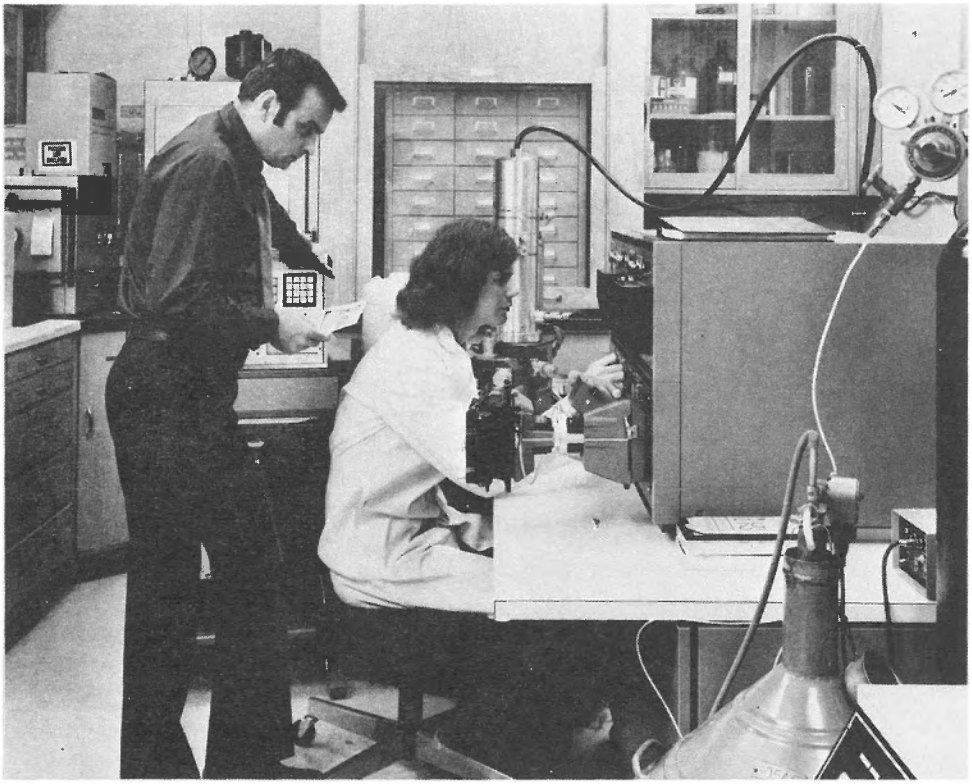
Miss S.A. Nash, *Conservator, Archaeology* – Studied history of art and anthropology at the Universtiy of Michigan, B.S. 1969, and conservation at S.U.N.Y., Cooperstown, M.S. 1973. She has previously worked at Bishop Museum, Honolulu, Olana Historic Site, New York, and as conservator at the University Museum, University of Pennsylvania.

Dr. R.D. Harley, *Chief, Scientific Documentation* – Graduated with B.A. in history at the University of London in 1956 and, also at London, obtained Diploma in Visual Arts, 1962, and Ph.D. in history of art, her thesis being published in 1970 as *Artists Pigments c. 1600–1835: A Study in English Documentary Sources.* She worked on technical liaison and public relations with Winsor and Newton Ltd., artists' colourmen, from 1958–73., has lectured at art schools and universities in the U.K. and America, and has also published papers on art materials past and present.

Mr. I.N.M. Wainwright, *Conservator, Documentation Studies* – Studied mathematics, physics and art history at McGill University, gaining a B.Sc. degree in mathematics in 1972. Since joining C.C.I. in the same year, he has undertaken photomicrography and documentation studies.

Mr. W. Bokman, *Conservator, Graphic Studies* – Studied photography at the Institute Lex Werkheim, Amsterdam, and has worked at the Central Research Laboratory for Objects of Art and Science since 1968. He is experienced in radiography and all types of photography connected with artistic works, including ultra-violet and infrared photography.

Mrs. M. K. Allan, *Conservator Technologist, Scientific Documentation* – Trained in England at Ealing School of Art and the College of Advanced Technology, Islington, specializing in photography and metallographic techniques. Formerly employed at the International Tin Research Institute, England, and in Canada at the Department of Mines, the National Research Council 1964–68, the Royal Ontario Museum, Conservation Laboratory 1968–71, and the Department of National Defence 1971–72.



Dr. J. Hanlan and Mr. R. Myers with the scanning electron microscope

MM. J. Hanlan et R. Myers devant le microscope électronique à balayage
(Photo: John Evans)

Scientific Services

The function of the Conservation Research Division located at Headquarters is to provide the scientific analysis, research and relevant information for the Canadian Conservation Institute. At this point, we need to answer three questions which might be asked by directors, curators or conservators: What scientific resources and services are available from C.C.I. at this time? What additional services may be expected within the next few weeks and months? How do I obtain these services from C.C.I.? The four sections of the Conservation Research Division are presently at different stages of staffing and operation. All are severely limited by inadequate laboratory space. Nevertheless, each can serve to varying degrees the scientific needs of museums, art galleries and collections across Canada.

Consultative Services

Authoritative information on the scientific aspects of conservation can be provided. We are currently preparing brief, accurate, timely and practical information leaflets addressed to directors, curators, collectors and conservators on a variety of topics such as museum lighting, environmental control, sources of supply of satisfactory materials, techniques for packing and shipping, toxicity and fire hazards of solvents and other materials, etc. When published, they will be provided upon request. Meanwhile, we will respond to individual queries. In exceptional circumstances, it is possible for members of the C.C.I. to conduct an environmental survey at an institution.

Analytical Services

With the presently assembled staff and very limited laboratory area, the range of analytical services has been restricted to those of greatest versatility and scope of application. Employing techniques recently developed, we can identify by x-ray diffraction the crystalline components in samples as small as two to three pigment particles. Newly improved techniques also allow determination of the elements present in even smaller samples. The energy dispersive x-ray instrumentation presently available similarly provides elemental analysis but without removal of a sample from the object – the detector is merely placed over the region of the object to be analyzed. The infra-red and pyrolysis-gas chromatographic instrumentation provides a capability for the analysis of binding media and other organic materials. Cross-sections of submitted samples can be prepared and interpretation of their structure can be provided by our documentation specialists.

Over the next few months, one-page leaflets describing the principles and application to conservation of various types of scientific instrumentation will be made available. They will describe sample type and size required, the type of substance most suited to analysis by the technique and kind of information which the technique provides. Not intended for the scientist, but rather the conservator, their main purpose is to suggest scientific methods which might be appropriate to a specific conservation problem.

Scanning Electron Microscope

An instrument of extraordinary present and potential applications to problems in conservation, the scanning electron microscope (SEM) has become operational in the past month. In this brief space, the full capabilities of the instrument and its associated analyser cannot be given, but two of the most important are indicated.

First is the ability to view a sample over a wide range of magnifications (50x–100,000x) quickly and easily but with, unlike magnification using an ordinary optical or light microscope, a great depth of field. Thus, an object such as paper which when viewed at 100x in an optical microscope shows only a few fibres in focus, fully displays the interlocking fibres when examined at the same magnification with the SEM. One can "see" the fungus mycelium in a "foxed" piece of paper; one can see how crystals of magnesium salts employed in the deacidification and buffering treatment of paper are dispersed in the felted structure.

The second important capability of our SEM is an elmental analysis of the image area; local concentrations of various elements can be determined thus providing the conservator and conservation scientist with insights, for example, into methods of fabrication, modes of deterioration and effectiveness of conservation treatment procedures.

Scientific and conservation staff of the C.C.I. have proposed many projects utilizing the SEM. It is anticipated that this equipment will be very much in demand by museum specialists in many fields.

D. K. SEBERA