

2000-2001 ANNUAL REPORT



# Chairman President



n behalf of the Board of Trustees and the Staff, we are very pleased to present the Annual Report of the Canadian Museum of Nature (CMN) for the period April 1, 2000 to March 31, 2001.

This was an exciting and challenging year for the Museum, with a number of notable "firsts," including:

- © CMN is the first museum in Canada to agree to the purchase of an Environmental Scanning Electron Microscope, which will enable our scientists to perform fine examination of surface sculpture and ornamentation of biological organisms without damaging specimens.
- 3 Our Web team worked with colleagues at the Royal Tyrrell Museum of Paleontology and the Musée du Séminaire de Sherbrooke to develop "Dig This! The Cretaceous Period," the first natural history component of the Virtual Museum of Canada, launched in February.
- <sup>©</sup> We are the first museum in Ottawa, and one of the very few in Canada, to offer visitors high-definition cinema, which delivers more than five times the resolution of standard video.
- We received a donation of seven diamonds from the Ekati Mine – the first Canadian diamond mine, located at Lac de Gras, Northwest Territories – and displayed the gems to the public in the exhibition Diamonds in the Rough.

These are some examples of our ongoing effort to determine and develop the most effective national service and leadership role in the Canadian museum community, an effort that is also the focus of our strategic planning for 2003-2008.

Since its beginning, CMN has maintained a research programme focused on systematics research – the science of identifying, naming, classifying and tracing the origins of living organisms and minerals. And our researchers have achieved international recognition of their expertise. Last fall, Conservation chief Robert Waller gave a one-week workshop on systematics at the Smithsonian Center for Material Research and Education, in Washington.

In a gesture of recognition familiar to a number of our researchers, Dr. Scott Ercit, one of our Rare Gems specialists had the new mineral species "ercitite" named after him by scientists at the University of Liège and the University of Manitoba. Ercitite is an extremely rare phosphate mineral.

The Museum was pleased to help organize and participate in a national conference entitled *Canadian Biodiversity Networks*, held March 1-4, 2001 in Ottawa and attended by over 200 delegates. The goal of the conference was to rejuvenate biodiversity science in Canada and it resulted in recommendations that are now being developed into action plans.

CMN has an important purpose – to lead Canadians in the adventure of discovering and understanding the natural world, and learning how to live in balance with this world. That adventure takes Museum scientists into unexplored corners of our country and the world, under the sea and into the earth. The specimens and knowledge they bring back enrich our collections and our public programming.



HONESTY AND INTEGRITY

RESPECT FOR PEOPLE AND NATURE

THE PURSUIT OF EXCELLENCE

CONTINUOUS LEARNING

CMN Corporate Values

# Contents

To maximize our ability to teach Canadians about their environment in a stimulating and informative way, the Museum needs state-of-the-art facilities and equipment. Our scientific equipment needs to be modernized to current technical standards.

We need to complete the renewal programme of our main exhibition facility – the Victoria Memorial Museum Building – begun this year. Federal and private sector support will enable us to achieve this over the next few years.

Those are two of the main challenges we faced in 2000-01, and we made considerable progress in meeting them. We look forward to the coming year, to continuing advancement on both of these fronts and to completing our work with the community to confirm the vision for the future service of the Canadian Museum of Nature.

In closing, we wish to express our thanks to the Board of Trustees, to Staff, to our Associates and to all of our Volunteers for your hard work and significant contributions to the Museum's service to Canada.

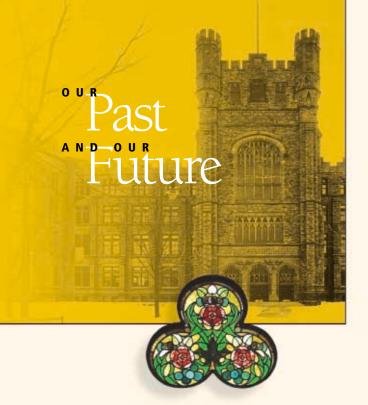
Frank Ling

Chairman of the Board of Trustees

Joanne DiCosimo

President and CEO

Report from the Chairman and the President	IFO
Our Past and Our Future	2
Achieving Our Goals	4
National Service and Impact	4
Demonstrating Public Value	11
Operating Systems: Human and Technical	16
Self-generated Revenue	18
Our People	20
Communicating Our Research	22
Research Associates	27
Involving the Community	28
Sponsors, Donors, Partners	28
Collaborators	30
Volunteers	33
Managing Our Financial Resources	34
Financial Analysis	35
Financial Statements	36
Management's Responsibility of Financial Reporting	36
Auditor's Report	36
Balance Sheet	37
Statement of Operations	38
Equity of Canada and Statement of Cash Flows	39
Notes to Financial Statements	40



#### SCIENTIFIC ORIGINS

The Canadian Museum of Nature (CMN) originated in the Geological Survey of Canada (GSC), formed in 1842 by Sir William Logan. In 1843, Sir William and his assistant, Alexander Murray, returned from their first field expedition – a geological survey of southern Ontario and Quebec – with hundreds of specimens and nowhere to store them. Sir William's brother, a businessman, let him store the specimens in a room above a warehouse in Montreal. There he and Murray spent the rest of the year unpacking, labeling, cataloguing and re-packing the specimens in numbered boxes – creating the Museum's first collection.

In 1851, Sir William developed a beautiful display of Canadian economic minerals for the Great Exhibition of 1851 in London, England. The Survey's first exhibit work was enormously successful. "Of all the British Colonies," the Exhibition Committee declared, "Canada is that whose exhibition is the most interesting and the most complete." Sir William's enormous success in London strengthened public support for the GSC, and set a precedent for the Museum's popular travelling exhibitions.

The years 1867-1907 were an exciting period of growth for the national Museum. The GSC's field officers studied, collected and reported on the country's topography, climate, flora and fauna, geology and mineral resources, as well as on Canada's aboriginal peoples.

#### FIRST PURPOSE-BUILT MUSEUM

In 1912, the Victoria Memorial Museum Building opened its doors to the public with spectacular exhibitions – in beautiful new display cases – of Canadian minerals, birds and fossils. The building commemorates Queen Victoria who died in 1901.

The Victoria Memorial Museum Building has been designated the third most important heritage building in Canada by the Federal Heritage Building Review Organization, after the Parliament Buildings and the Parliamentary Library.

Charles M. Sternberg discovered the bulk of dinosaurs in our collections in southwestern Alberta and shipped them back to Ottawa. The skeleton of the edmontosaurus was the first dinosaur mounted for public display in Canada in 1913 and is still on view in the Life through the Ages Gallery.

#### NEW BEGINNINGS

CMN became a Crown Corporation on July 1, 1990. By this time, the Museum's operations were scattered over 13 buildings throughout the National Capital Region where CMN's treasures were kept in less than ideal environments. A long-term project was initiated to consolidate all operations except exhibitions and public programming activities into one new building.

The Natural Heritage Building in Alymer was inaugurated in May 1997. With its leading-edge technology, the new collections and research facility is designed to foster advanced collection management and protection techniques necessary to safeguard Canada's natural history collection. It is also the birthplace of our exhibitions and special displays.

Ten million specimens, including tiny dried flowers, delicate arrays of pinned insects and two-ton dinosaur fossils, were carefully packed and moved from different locations around the National Capital Region to the new facility. CMN received a Canadian Museums Association Achievement Award for the move in 1998.

#### OUR FUTURE

CMN's mandate is to increase, throughout Canada and internationally, interest in, knowledge of and appreciation and respect for the natural world. We fulfill this mandate by establishing, maintaining and developing

for research and posterity, a collection of natural history objects, with special but not exclusive reference to Canada, and by demonstrating the natural world, the knowledge derived from it and the understanding it represents.

As a public institution created by the federal government for the benefit of Canadians, CMN's vision of its place in Canadian society is:

- To be a recognized national leader in the natural history and museum communities
- To be an educational institution with a presence across Canada
- To be a viable and efficient organization

In order to realize this vision and carry out our mandate, we need to start from a solid home base. The over 10 million specimens that form the collections held and protected by CMN form the heart of the Museum and the basis for its contribution to Canada. They make it possible to analyze and address a variety of emerging challenges to the natural heritage of Canada. The scientific work of CMN ranges hugely in time and space, and covers an enormous spectrum from examining the evolution of life on earth to undertaking polar research in order to predict the impact of environmental change.

A national survey carried out for CMN earlier this year confirmed that a strong majority of Canadians are interested in environmental issues, think that nature issues affect the quality of their personal lives and believe that nature is inherently valuable. Respondents expressed interest in a range of science topics chosen for future projects including human health and the environment, the biology of the human body and ocean life.

These responses reinforce the Museum's decision to open three new signature galleries over the next few years. CMN is currently completing the design of the new Fossil Gallery, has begun development of the Nature of Humans Gallery, and is reviewing options for an Oceans Gallery.

The last major renovations to the Victoria Memorial Museum Building occurred in 1969-70. CMN has now secured Treasury Board funding to undertake a major renewal of the building. This renewal programme is essential to CMN's ability to serve Canadians.

In addition to basic building code upgrades, the building systems — such as environmental controls, electrical, communications, and structural — will be designed to meet natural science museum requirements and to enhance the visitor experience to the Victoria Memorial Museum Building, which will remain open to the public while renovations are being done.

CMN is seeking broad community participation through a Capital Campaign to assist in creating exciting and enriching new exhibitions and programmes. The renewal programme will be the stepping-stone to increased service to Canadians.

## **Parliamentary Connections**

After a fire destroyed the Centre Block of the Parliament Buildings in 1916, the seat of government moved temporarily to the Victoria Memorial Museum Building. The House of Commons sat in the auditorium (pictured at right) for four years while the Senate occupied the Hall of Invertebrate Fossils. Sir Wilfrid Laurier never returned to the Hill. He died in 1919 and his body lay in state surrounded by flags and flowers in the Museum's auditorium.



# Coals



# National Service and Impact

One of the Museum's four major goals this past year was to serve, at home and abroad, as a credible source of knowledge in the natural sciences and as an active member of the museum community in order to further Canadians' understanding of the natural world and their appreciation for their natural heritage.

# PROVIDING VIRTUAL ACCESS TO OUR COLLECTIONS

MN is committed to using communications technology to improve access to our resources and to increase Canadians' understanding of the natural sciences and the environment. An ongoing project to digitize the collections will enhance the speed and quality of access to our data by CMN curators and researchers, and permit others to have access to it. It will reduce the time-consuming searches previously necessary to respond to internal and external collection data requests.

Staff achieved this year's goal of creating 20,000 new Master catalogue records by more than 200 percent, bringing the total of national collections records now available electronically to over 450,000. New partnerships with other natural history museums and collection-holding institutions in Canada have allowed CMN to

support data entry and access projects such as Biota of Canada – Bird Module, FISHNET, and BC Living Landscape, working in collaboration with the Canadian Heritage Information Network (CHIN).

CMN helped centralize public access to information on millions of museum objects, natural history specimens and archaeological sites through the CHIN Web site. Our collections staff sent 14,500 palynology (pollen and spores) records to Artefacts Canada, which is part of CHIN.

This year we launched successfully our fully redesigned Web site **nature.ca**, which received over two million unique site visits – a 53 percent increase over last year. The new look and feel, improved navigation controls, and emphasis on presenting the museum information with full-colour photography garnered positive feedback from users. Staff responded to over 1,000 information requests via the Web site, of which 80 percent were from Canada and others from as far away as Japan and New Zealand.

## **Digitizing CMN's Collections**

April Hurst in Collections sorting location of flora specimens prior to entering data into master catalogue.



Digitizing our collections is an ongoing priority at CMN. Not only is it an essential step in cataloguing our most valuable assets, it is equally important in terms of providing timely access to our scientific resources both within CMN and among the research community as a whole. This year's goal of creating 20,000 new Master catalogue records was more than doubled – by March 2001, over 450,000 national collections records were available electronically.

The Museum was one of the first participants in the Virtual Museum of Canada (VMC) a public gateway to the online content created by Canada's museums. CMN's Web team collaborated with CHIN, the Royal

Tyrrell and the Musée du Séminaire de Sherbrooke to develop "Dig This! The Cretaceous Period," the first natural history component of the VMC, launched in February as part of the first phase of offerings.

The Museum also signed an agreement to contribute metadata on a regular basis to SchoolNet, a collaborative initiative led by Industry Canada offering an education resources Web site aimed at teachers, students and parents.

# PRESERVING OUR NATURAL HERITAGE

Growing at a rate of about 40,000 specimens a year, CMN's collections are a vital source of natural history information. One of the major tasks of collections staff is acquiring, documenting and housing specimens that are gathered in current research, those needed for public education purposes and the ones transferred under existing or new agreements. To help focus these activities, the Museum established a task force in 2000-01 to create a long-term collection development plan in consultation with other Canadian collections-holding institutions.

One of the most remarkable acquisitions this year was seven diamonds (one cut and six crystals) from the Ekati Mine – the first Canadian diamond mine, located at Lac de Gras, Northwest Territories – donated by

owners BHP Diamonds Inc., Dia Met Minerals Ltd., Chuck E. Fipke and Dr. S. Blusson. Following evaluation and cataloguing by the Rare Elements research team, the gems were displayed to the public in the exhibition *Diamonds* 

in the Rough. The exhibition opened January 26 and is expected to run until the fall of 2001, supported by Compaq Canada, Davidson's Jewellers and the mine owners and operators.

Staff incorporated into the collection 95 percent of the over 18,000 insect specimens recently donated by Dr. Henry and Anne Howden, and others donated by Dr. Stewart Peck and François Génier.

# MAKING DISCOVERIES ON LAND AND UNDERSEA

Research in the natural sciences is one of our major functions, involving discovery, generation of new knowledge, and accumulating and analyzing scientific information. The Museum's focus is systematics research and the application of our expertise to specific projects in biodiversity, palaeobiological studies and rare elements. Systematics research – in which CMN is a world authority – is the identification and classification of all forms of nature and is done on minerals, fossil plants and animals, and recent fauna and flora. The results of this research increase understanding and appreciation of natural diversity so that it can be conserved and properly managed. CMN staff undertakes research on specimens in the collection and this year also spent a total of 306 days doing fieldwork.

## Playing a Leading Role in Biodiversity

PHOTO: DR. LYNN GILLESPIE

Monique Richard surveying aquatic plants in Dow's Lake as part of the Rideau River Biodiversity project.

In March 2001, CMN President Joanne DiCosimo and Director of Research Mark Graham helped spearhead the first Canadian Biodiversity Network Conference. The goal of the conference was to develop an action plan to create a national network on biodiversity. With more than 10 million specimens in its collection, CMN is a world leader in research and collections management (the storing, cataloguing and displaying of specimens). This level of expertise will be invaluable to the Network as the initiative moves forward. In addition to its valued participation at the conference, the Museum runs the Canadian Centre for Biodiversity as well as a component of the Biological Survey of Canada. Dr. Graham, a key participant at the conference, is also Chair of the Federal Biosystematics Partnership.

#### **Understanding and managing biodiversity**

CMN initiated the Canadian Centre for Biodiversity (CCB) a decade ago. The research component of the Centre provides a coordinated means to understand and manage biodiversity through basic systematic and ecological work. Results and expertise from projects through the CCB provide key content and context for new CMN developments such as the Nature of Humans Gallery, the Oceans Gallery and the Nature Discovery Fund.

- <sup>63</sup> Dr. Claude Renaud is part of a team that received confirmation of funding in the amount of \$200,000 from the U.S. National Science Foundation for the "Systematics and Biogeography of Lampreys" project on which he is co-investigator. CMN has the best collection of Canadian lampreys in the world.
- © Dr. Irwin Brodo conducted fieldwork on the Queen Charlotte Islands resulting in new information on shoreline lichens and discovery of new and rare lichens. His manuscript for an 800-page book, *Lichens of North America*, is in the final stages. He also discovered a lichen new to North America right on the Museum's Natural Heritage Building property in Aylmer.
- <sup>©</sup> Dr. Lynn Gillespie, accompanied by Laurie Consaul, conducted fieldwork in the Canadian Arctic and collected over 1,500 plants specimens and 500 tissue samples for DNA work.



The Rideau River Biodiversity Project (RRBP), spearheaded by the Museum and a team of local partners, involves the community in studying and conserving our aquatic bio-heritage. The project team is developing inventories of the living organisms and water chemistry at key points along the river. Once all the results are in, the community – including scientists, environmental groups, management agencies, ratepayers' associations and recreational groups – will have a framework to monitor the river's biodiversity into the future. In this third and final year of the project, about 800 chlorophyll samples were analyzed and about 15,000 data points from the Hydrolab probe were transferred into a Museum database.

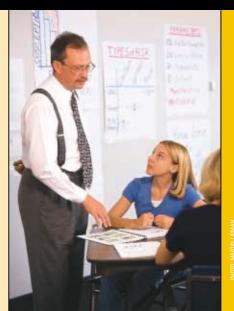
The CMN team developed tools for the community as a legacy of the project, including a community guide to biodiversity and several school kits. Paul Hamilton from CMN sat on the Round Table Committee that received a \$143,000 grant from the Ontario Trillium Foundation to continue the community work on the Rideau River.

The television documentary *Rivers: Reflections of Life* about the RRBP – a co-production of the Museum with Carleton Productions – aired on the Ottawa CTV affiliate in September, with an estimated audience of 150,000. It was featured at the Canadian Recreational Canoeing Association's Waterwalker Film Festival February 23 - 24 (hosted by CMN) where it won first prize in the Environment category and was selected to travel to more than 70 cities for the "Best of the Festival" feature.



#### CMN Advises Smithsonian and Other World-Class Institutions

The Canadian Museum of Nature is a leading natural history museum whose experts are often called upon to lend their scientific expertise to other institutions around the globe. Several of our scientists travel extensively throughout the year, extending the Museum's exposure and reinforcing our prestigious international reputation. One such expert is Robert Waller, who taught a one-week workshop at the Smithsonian Center for Material Research and Education. Other stops in his busy schedule included the University of Göteborg Institute for Conservation in Sweden and the Hong Kong Museum of Art, where he lectured and provided expert advice on collection management and conservation issues. In addition to personal appearances, his recorded lectures were delivered to audiences in England and Australia.



Robert Waller teaching a workshop at the Smithsonian Center for Material Research and Education.

## Uncovering the prehistoric past

The goal of this research is to describe and classify fossils and reconstruct their evolu-

tionary, biogeographical and ecological relationships in association with environmental change. Research results and expertise will also help CMN develop the new Fossil Gallery and the Nature of Humans Gallery.

- 3 Dr. Jaelyn Eberle completed a month's fieldwork last August in Colorado, in collaboration with scientists from the Denver Museum of Nature and Science. Their search for fossil mammals discovered teeth of archaic ungulates called "condylarths", teeth of "multituberculates" (so named for the many bumps or tubercles on their teeth) a mammalian group with no living descendants, and bones of large turtles and other animals. Fossil mammals from the Denver Basin, like those of few other places in North America, tell the story of what happened among mammals immediately after the dinosaur extinction and reflect critical steps in the evolution towards modern mammalian groups. Her work was featured in September on the Discovery Channel's @discovery.ca.
- <sup>33</sup> Dr. Xiao-Chun Wu, a new CMN research scientist, conducted research in the Qinling Mountains of Central China with colleagues from China's Northwest University in Xi'an. Dr. Wu's team searched for dinosaur and other fossil remains in deposits spanning the Cretaceous-Tertiary boundary, the geological interval that includes the extinction of the dinosaurs.



© CMN staff uncovered a "new" dinosaur right in their own backyard. Dr. Robert Holmes, Kieran Shepherd and colleagues from the Royal Tyrrell

Museum and the State University of New York determined that the skeleton of the chasmosaur – a horned dinosaur from the Late Cretaceous period – a fossil found in Alberta more than 40 years ago was in fact a new species. To honour the discovery, a life-sized version of the chasmosaur was commissioned, the first of seven fleshed-out dinosaurs being prepared for the Museum's new Fossil Gallery scheduled to open in 2005. A CMN national "Name the Dinosaur" contest in partnership with Quaker Oats resulted in the nickname Chasy, which is being used in CMN promotional materials.

<sup>69</sup> The National Geographic Society awarded Dr. Michael Caldwell a US \$20,000 grant to continue his work on fossil snakes of the Cretaceous Rio Colorado Formation in Patagonia, Argentina.

# COLLABORATING AT HOME AND ABROAD

Collaborating with the outside research community in Canada and abroad to undertake projects and share knowledge is essential to the multidisciplinary work of the Museum.

For the third year, Dr. André Martel was Assistant Director of the Bamfield Marine Station (BMS), a magnificent teaching and research facility on the western

## **Fostering International Cooperation in Education**

In January 2001, CMN's Dr. Hugh Danks travelled to Kochi, Japan to participate in a workshop sponsored by the Japanese Ministry of Education to produce a new textbook for Japanese high-school biology students. In addition to lecturing at the workshop, co-chairing sessions, leading round-table discussions and being a member of the International Editorial Board, Dr. Danks has been asked to prepare two chapters for the textbook that draw on his particular research expertise in geographic differences in diversity and seasonal adaptations. Said Dr. Danks of his experience, "The workshop not only fostered international cooperation and understanding with respect to mutual interests in education, it confirmed the valuable link between education and research."



Dr. Hugh Danks planning content for Japanese high-school biology textbook.

OTO: MARTIN LIF

edge of Vancouver Island. It is operated as a consortium of five western universities: Calgary, Alberta, Simon Fraser, Victoria and British Columbia, and Dr. Martel's appointment is a co-staffing initiative. He organized and ran the MacMillan Coastal Biodiversity Workshop at Bamfield June 17-25, which was a tremendous success. This year's focus was "Diversity, monitoring and assessment techniques for rocky intertidal seaweed and invertebrate communities." A total of 19 participants, including graduate students, government employees and NGO members came from various provinces, states and countries. The intensive monitoring work from the entire group has led to the establishment of an official Environment Canada Ecological Monitoring and Assessment Network (EMAN) site near BMS.

Dr. Steve Cumbaa travelled to Berlin, Germany to work with his colleague, Dr. Hans-Peter Schultze, Director of the Museum für Naturkunde, on the description of a new genus and species of acanthodian, a tiny, 400 million-year-old fossil fish they discovered in 1997 in rocks along the Anderson River, NWT.

Robert Waller gave a one-week workshop on Collection Management and Conservation at the Smithsonian Center for Material Research and Education, and gave two presentations at the University of Göteborg Institute for Conservation in Sweden. In addition, his recorded lectures were delivered to audiences in Stoke-on-Trent, England and Sydney, Australia.

In January Dr. Hugh Danks travelled to Kochi, Japan to participate in a planning workshop to produce a new textbook for Japanese high-school biology students. As a result, the Japanese Ministry of Education has asked him to prepare two chapters for the textbook that will draw on his particular research interests in geographic differences in diversity and seasonal adaptations.

Jean Lauriault and a colleague from the Université du Québec à Montreal presented two training seminars in Chad and Niger, funded and managed by the Intergovernmental Agency for French-Speaking Countries. The objectives of the seminars, attended by 60 civil servants and teachers, were to enrich and spread the current knowledge on biodiversity as well as to improve the ability of the participants to set their own national priorities on biodiversity.

#### TRAINING THE NEXT GENERATION

In addition to sharing knowledge with other professionals, our staff participated in a wide range of activities based at the Museum and at educational institutions across the country to transmit their expertise to young

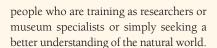


## Students on Ice

In December 2000, Dr. Kathleen Conlan participated in the "Students on Ice" voyage to the Antarctic. This trip brought together a total of 90 participants, including 54 high school students and 30 teachers from across Canada. Throughout the journey, Dr. Conlan lectured and gave workshops on marine biology and ecology. This amazing trip was captured on video and the footage is being used to produce the pilot for a 13-part children's expedition TV series, Young Explorers, for which the CMN is a scientific advisor.

PHOTO: MIKE BEEDELI





- <sup>23</sup> As part of Algonquin Community College's Applied Studies Programme, CMN staff presented a course on Natural History Collections, giving lectures, leading field trips and organizing workshops. Five students from the programme have chosen to do their internship/field placement at CMN.
- 30 Dr. Kathleen Conlan participated in the "Students on Ice" trip to the Antarctic giving lectures and workshops on marine biology and ecology. The trip had 90 participants, including 54 students and 30 teachers. Video footage from the trip is being used to produce the pilot for a 13-part children's expedition TV series *Young Explorers*, for which the CMN is a scientific advisor.
- <sup>69</sup> Dr. Claude Renaud and Dr. Lynn Gillespie gave lectures on biodioversity-related topics to graduate and undergraduate students at the University of Ottawa, where they are Adjunct Professors.
- <sup>(6)</sup> Dr. Steve Cumbaa participated in the Northern Scientific Training Program committee meetings organized by Indian and Northern Affairs Canada (February 15-16). The committee's mandate is to promote student research in Canada's north through

grants to projects in the physical, biological and social sciences, and this year it distributed more than \$650,000 to successful applicants.

© Erik Klingbiel, a M.Sc. student at Carleton University being supported with a CMN graduate fellowship, is conducting

field research in the Ottawa-Carleton area investigating indicators of the biodiversity of wetland habitats.

There were 86 behind-the-scenes tours at CMN's Natural Heritage Building this year with a total of 1,273 visitors. One noteworthy tour was for architecture students and professors from Laval University who were hosting fellow architecture students and professors from Lyon, France in a joint exchange programme. In addition, 87 students from Jean-de-Brébeuf school in Hull, who were preparing to build a model of the city of Quebec, were given a tour by our interpreters and a special presentation by Jonathan Ferrabee on model-making.

# BUILDING NETWORKS OF EXPERTISE

With its partners, CMN plays an active role in facilitating and contributing to national networks of scientific and museum expertise, and in articulating national and international requirements and priorities for the museum and the scientific communities.

After eight months of planning, CMN played a leading role in a national conference entitled *Canadian Biodiversity Networks*, held March 1-4, 2001 in Ottawa and attended by over 200 delegates. The goal of the conference was to create a plan to rejuvenate biodiversity science in Canada and it resulted in recommendations for action. CMN is a member of the team that will draft an action plan.

## Canada-Mexico-Cuba Student Exchange Programme

Eight high school students from Mexico and four from Cuba visited Canada in June 2000 as part of the CMNorchestrated Canada-Mexico-Cuba Student Exchange Programme. Among the many activities were tours of the CMN facilities in Ottawa and Avlmer, visits to the Biodôme and Insectarium in Montreal, and an excursion to the Royal Botanical Gardens in Hamilton. The Montreal stopover coincided with the opening of the Museum's travelling exhibition Monarca at the Biodôme, where CMN announced the donation of the exhibition to the Museum of Natural History in Mexico City. The purpose of the Student Exchange Programme is to increase awareness among young Canadians, Mexicans and Cubans about environmental and scientific issues of importance to their countries, with particular emphasis on monarch butterfly conservation.



student Ludger Tousignant enjoys a personal encounte with a monarch butterfly in Mexico. Together with five other federal partners (Agriculture and Agri-Food Canada, Natural Resources Canada, Environment Canada, Fisheries and Oceans Canada, and Parks Canada), CMN re-defined the Federal Biosystematics Partnership (FBP) in 1998. Dr. Mark Graham of CMN chairs the FBP, which held several meetings this year to plan the Needs Assessment for federal expertise in systematics research and to determine the Canadian position on the formation of the Global Biodiversity Information Facility.

This year CMN participated in a number of external committees working on issues and policy development in biodiversity, including:

- <sup>©</sup> The Canadian Committee for the International Union for the Conservation of Nature (IUCN) met at the Museum to develop their input for the 2nd IUCN World Conservation Congress, which was held in Jordan last October. The Jordan conference allowed CMN representative Anne Breau to take the pulse on a variety of conservation issues with colleagues from around the world.
- <sup>30</sup> A two-day meeting of the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) Bird Species Specialist Group was held at CMN.



® Dr. Mark Graham continued to represent Canada as a member of the Co-ordinating Mechanism for the Global Taxonomy Initiative. He was also part of the Canadian Delegation at the Subsidiary Body for Science, Technology and Technological Advice (SBSTTA) in March. The SBSTTA provides scientific advice to the UN's Global Convention on Biological Diversity.

Dr. Mark Graham chaired a Tri-Council Working Group (Natural Sciences and Engineering Research Council, Social Sciences and Humanities Research Council, and the Canadian Institutes for Health Research) session to determine best practices for dealing with research collections. The final notes have been made available to researchers on the NSERC Web site.

Gerald Fitzgerald and Dr. Mark Graham are founding members of the Natural History Collections and Research Special Interest Group (SIG) of the Canadian Museum Association, a consortium of natural history facilities for the purpose of building an effective network and a useful database to enhance research capacity, biodiversity activities and to link collections. They were invited panelists in a session entitled *Learning through Natural History Museums* during a one-day CHIN Users meeting last August. Robert Waller made a presentation on "Risk Assessment and Conservation Planning at the Canadian Museum of Nature."

Botanist Dr. Susan Aiken represented Canada at the first working group of the Conservation of Arctic Flora and Fauna Group in Uppsala, Sweden, March 27-29, and presented a talk on the Circumpolar Protected Areas Network.

## Fostering an Appreciation for Nature

Students from Frenette high school explore river ecosystem through CMN's Adopt A River initiative.

CMN's involvement in natural science education has many elements. In addition to conducting Nature Workshops, the Specimens on Loan programme allows schools across the country to use parts of selected collections as aids in their teaching modules. Organized visits from schools this year included 46,995 eager participants. Activity sheets and school tours are curriculum-based, making them extremely relevant in educational terms. A special partnership has been developed with Grande-Rivière high school in Aylmer, with 15 students from grades 10 and 11 participating in the Environmental Stewardship Programme of the Museum's site at the National Heritage Building, among others. This partnership is now in its second year and represents an integral part of the students' curriculum.



PHOTO: FRENETTE HIGH SCHOOL

# Demonstrating Public Value

A second major goal of the Museum this year was to share and communicate the nature and results of work done by the institution locally and nationally, and to seek broad community participation in CMN activities and programmes.

# OPENING THE DOORS TO LEARNING AND EXPERIENCE

he Museum is constantly changing and opening up new territory for Canadians to explore. Ten signature galleries in the Victoria Memorial Museum Building are complemented by special short-term exhibitions that focus on particular aspects of the natural world and by lively and original programmes of nature interpretation, workshops, films, lectures and demonstrations. CMN continued to seek partnerships for all levels of activity to enhance the range of offerings.

Passionate Vision was one of two major exhibitions to open this year. Produced by CMN, the exhibition was presented by Investors Group and supported by the Millennium Bureau of Canada. Scientist/astronaut/ photographer Dr. Roberta Bondar spent two years travelling the country by plane, helicopter, boat and snowshoe in order to record images of all of Canada's national parks. The cumulative results were a stirring trans-Canada portrait of 108 images, which opened to the public in June 2000 with the involvement of Parks Canada and the Canadian Parks Partnership. The exhibition received excellent response from visitors. Special daily summer programming about Canada's

national, provincial and municipal parks systems complemented *Passionate Vision*, as did a photo contest co-sponsored by *Canadian Geographic* magazine as part of its annual amateur photo contest. The exhibition began a national tour in November with a first stop at the Royal Ontario Museum and is scheduled to visit more venues across Canada by the end of 2002.

The second major special exhibition Animal Athletes,

featuring the athletic abilities of animals, opened at the end of September to coincide with the 2000 Summer Olympics. Colourful, dynamic and highly interactive, this exhibition examined how living creatures have developed abilities to survive in their natural environments. Running tracks, play structures and diet consultations let participants compare their skills against record-holding animals. The launch included an Olympic parade attended by local Olympians. Two well-known sportscasters animated the event: gold-medallist and CJOH-TV host Carolyn Waldo and Louis Jean, RDS host and newscaster. The exhibition is being refreshed for the Games of La Francophonie in 2001.

## **Natural Science for Today's Children**



In an era when children are inundated with sophisticated messages from computer and video entertainment venues, it is more important than ever to make science learning relevant, stimulating and fun. CMN's Dr. Steve Cumbaa is a specialist in developing natural science educational materials for children. He has authored a number of prize-winning children's science books, including *The Bones Book and Skeleton* and *Megalodon, the Prehistoric Shark*. In June 2000, Dr. Cumbaa was a panelist for a workshop held at the annual meeting of the Canadian Science Writers' Association in Toronto on "Writing Science for Children." He also participated in segments of the CMN/Rogers Cablevision *It's in Our Nature* series and served as scientific editor and contributor for *YES* magazine's special October 2000 dinosaur issue.

Dr. Steve Cumbaa showing students fossil shark teeth and how they compare with teeth from the jaws of a tiger shark from CMN's collection.

Seasons of the South, a large exhibition of photographs and artwork produced in conjunction with the Australian High Commission, opened in January as part of CMN Winterlude activities, Ottawa's annual winter festival.

In partnership with the Royal Botanical Gardens of Hamilton, CMN is designing and producing *Green Legacy*, a travelling exhibition on rare and endangered Canadian plants expected to open in spring 2002. The exhibition will include live plants, a Web site, interactive maps and dioramas. It is scheduled for an extended national tour after it completes its run at the Victoria Memorial Museum Building. For the summer of 2001, CMN is preparing a complementary exhibition that will expand the scope and depth of *Green Legacy* for its Ottawa presentation.

#### **Developing new signature galleries**

To meet its goal of offering exciting and enriching exhibitions and programmes to Canadians, the Museum is conducting a National Campaign in the private sector to enable the construction of three new galleries on themes of demonstrated interest to Canadians – Fossils, Oceans, and the Nature of Humans.



The new Fossil Gallery will feature the great dinosaurs on the cusp of extinction and the startling development of mammals after the dinosaurs were gone. Dr. Steve Cumbaa and Research Associate Rob Holmes have been working on selecting casts of marine Cretaceous reptiles for the gallery and developing innovative poses with the designer and the company providing the casts. A total of seven fleshed-out dinosaurs are being prepared, including the chasmosaur and the adult daspletosaur, which have already arrived. Major specimens have been purchased and may form the core of the travelling exhibition component of this project, focused on marine reptiles of the Late Cretaceous. The gallery is scheduled to open in 2005.

Initial planning is underway for the Nature of Humans Gallery and the Oceans Gallery including identification of concepts, narrative descriptions, artists' renditions of the galleries and preliminary cost estimates. They are scheduled to open in April 2006 and 2008 respectively.

As part of the redevelopment of the Victoria Memorial Museum Building, CMN is planning a Discovery Centre where Canadians, and especially young Canadians, can use our collections and research and access our staff and volunteers to enhance and better understand their encounters with nature. The space will include labs, live specimens, a small amphitheatre, display space and interactive elements that will create a unique programming focus for the Museum.

## Discovering a New Dinosaur ... and Partnership

A new dinosaur was uncovered by CMN in Ottawa: the *Chasmosaurus* sp. The skeleton was found in Alberta more than 40 years ago by Dr. Wann Langston, but palaeontologists only recently determined that it was in fact a new species. To honour the discovery, a life-sized, fleshed-out (full body) version of the chasmosaur was commissioned – the first of seven fleshed-out dinosaurs being prepared for the Museum's new Fossil Gallery expected to open in 2005.

To raise awareness of the new find, Quaker Oats of Canada Limited partnered with the Museum in a nation-wide *Name the Dinosaur* contest, with details of the new chasmosaur and nicknaming contest appearing on over 80,000 oatmeal cereal boxes on sale across Canada. In addition, Lego supported the programme

by sending two of their master designers to the launch in Ottawa, where they built the world's first Lego chasmosaur. Lego also provided each of the 101 winning entries with a Lego dino kit.

The contest was an unparalleled success. Six thousand responses were received by Quaker – a number that rivals some of the Disney movie cross-promotions they have orchestrated – providing wide exposure for CMN.

The lucky winner of the contest was seven-year old Adam Strueby from Regina, Saskatchewan. Adam's suggested nickname *Chasy* is now figured prominently on signage and a promotional mug. Adam and his family were flown to Ottawa in March 2001 for an all-expenses paid week of activities and celebration.

#### **Interpretive activities**

One of our most popular annual events, "Meet the Scientists", took place in January at the Victoria Memorial Museum Building to demonstrate to the public various collection care methods and techniques. Dr. Steve Cumbaa talked about living and fossil sharks, and let youngsters sort fossil shark teeth. Dr. Jaelyn Eberle showed the crowds a fossil brontothere skull and those of recent mammals, and talked about determining diet from tooth type and wear. Dr. Xiao-Chun Wu impressed them with fossil croco-

diles and a discussion of dinosaur extinction. Drs. Joel Grice, Scott Ercit, Bob Gault and Willow Wight impressed visitors with their knowledge about gem deposits, the uses of rare elements and Canadian diamond deposits.

The "Trading Post" was open on weekend afternoons for children aged 6 to 14 with ongoing participation from existing and new "traders" and those interested in learning about collections, classification and identification.

A new programme for younger children "All Aboard the Nature Train" (for ages 2 to 6) was funded in part by the George Lunan Foundation and offered on weekend mornings, engaging young children with costumes, games and hands-on specimens.



# Community and school programmes

CMN staff create links with community organizations who want to use the Victoria Memorial Museum Building and/or CMN staff as a resource to help carry out their activities.

"The Art of Nature" event, funded by the J.P. Bickell Foundation, was offered over three weekends in November with artists stationed in different galleries throughout the Museum. Jane Dragon, a member of the CMN Board of Trustees, provided a public presentation on northern

Aboriginal uses of natural materials, which was advertised through the Centre for Traditional Knowledge.

A summer City Parks programme was offered with visits by CMN Interpreters to various municipal parks to conduct activities in conjunction with park children's programming, and Fall Rhapsody programming in two locations in Gatineau Park outside the city attracted over 2,300 participants.

School programmes involved over 50,000 children in nature programming, including nature workshops, year-end events, gallery guides, school outreach, specimens on loan and professional development workshops for teachers.





ame the Dinosaur contest winner, Adam Strueby, with Jennifer de Lagran FQuaker Oats and Dan Steininger and Paul Chrzan of Lego.

#### Launch of high-definition cinema

CMN is the first museum in Ottawa, and one of the very few in Canada, to offer visitors high-definition cinema, which delivers more than five times the resolution of standard video. As part of the CineMuse Network, we launched the first feature "Mischevious Meerkats" to the public in March following a premiere event for members, staff and volunteers in February. Over 3,000 people attended the public screenings, which are included in the admission fee.

### **Integrating traditional Aboriginal knowledge**

CMN has an interest in exploring various ways of integrating traditional Aboriginal knowledge and scientific knowledge in order to create a larger understanding of the natural environment. To support this exploration, CMN is providing office space, furniture and equipment at our Natural Heritage Building for the Centre for Traditional Knowledge (CTK). CMN and CTK staff are discussing the potential for collaborative projects in research, collections and public education, including a possible Dené experience exhibition.

#### SHARING KNOWLEDGE AND EXPERTISE

#### **Travelling exhibitions**

CMN sent exhibitions on tour to other museums, zoos, art galleries, exhibition centres, community centres and other public institutions. This programme was notably successful this year with 10 different exhibitions of different scales travelling to all corners of the

country - ranging from small "suitcases" suitable for classroom presentations to substantial offerings such as Monarca. The Museum is developing an expanded range of travelling exhibitions, including Passionate Vision and Green Legacy, plus travelling components of all the major signature galleries. The first of these offerings will be an exhibition of prehistoric marine reptiles, scheduled to travel in 2003.

#### Canada-Mexico-Cuba student exchange

This youth exchange programme was organized for the fourth year in partnership with the Royal Botanical Gardens, the Montreal Insectarium and the Museum of Natural History in Mexico City to increase understanding about environmental and scientific issues of importance related to monarch butterfly conservation. This year, eight Mexicans and four Cubans visited Canada between June 16 and June 25. CMN arranged for the travelling exhibition Monarca...butterfly beyond boundaries to open at the Biôdome in Montreal to coincide with the arrival of the exchange students. During the

grand opening, on June 22, in the presence of director Marco Bassols, CMN announced the donation of Monarca to the Museum of Natural History to take place in winter 2002. The exhibition will be made into one of the Museum's permanent galleries in Mexico City.



High-definition cinema is the highest-quality form of digital video available today, thrilling audiences with movies that deliver more than five times the resolution of standard video. In December 2000, CMN joined the CineMuse Network – the world-class production facility and distributor of high-definition movies - making it the first Canadian museum in the network to offer this state-of-the-art viewing technology to its audiences. Visitors to the Museum now enjoy regular screenings of naturerelated programming, free of charge. CMN is also partnering with CineMuse, which is headquartered in Robert DeNiro's Tribeca Film Centre in New York City, to produce new nature-related documentaries.



#### **Environmental stewardship**

The CMN continued its stewardship, management and study of the Natural Heritage Building site, to sustain and enhance ecological value, and to share the knowledge gained with the public and other stakeholders. We implemented an environmental training program with Grande-Rivière high school and 12 of their students participated in an inventory of trees and insects at the Aylmer site. This partnership is now in its second year and is an integral part of the high school students' curriculum.

#### GETTING THE WORD OUT

CMN staff strengthened the reach and impact of communications and advertising to attract new audiences and repeat visitors to the Victoria Memorial Museum Building. They implemented comprehensive tourism strategies and participated in cross-promotion activities including International Museums' Day and other activities in the National Capital Region such as

Winterlude and the Tulip Festival. This year saw a repeat broadcast of 10 episodes of *It's In Our Nature*, co-produced with Rogers Cablevision, for an estimated combined audience of 37,500. New episodes are planned for the fall.

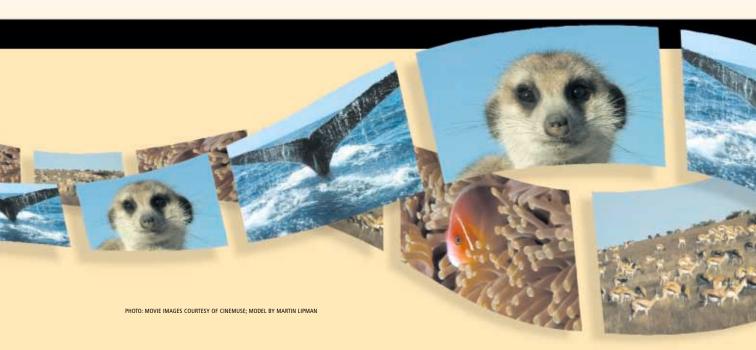
A major new development was the launch of the Museum's online publications and products catalogue in January 2001. It is the first database the Museum has developed and made available via the Web. It will serve as the base for future expansion with new products (such as copyright images) as they become available. The online catalogue represents a new customer base and allows CMN staff to be more responsive to clients.

Figure 1 - Audience Reach

	2000-01	1999-00	Variation % 2000/01 vs 1999/00
Local Attendance (after-hour, open-hour, NHB, NCR)	314,554	348,396	- 9.7%
High attendance venues	371,000	375,000	- 1.1%
Multi-media (TV) (1)	1,038,750	4,815,000	- 78.4%
Unique Web site visits (2)	2,008,558	1,312,428	+ 53.0%
Travelling Exhibitions	350,500	119,000	+ 194.5%
Purchase CMN products (3)	1,924	72,318	- 97.3%
Number of school group visits (4)	1,141	982	+ 16.2%
Number of participants in school group visits	46,995	40,441	+ 16.2%
Number of people participating in guided tours	1,884	1,366	+ 38.0%
Number of people participating in workshops	9,524	9,495	+ 0.3%

#### NOTE

- (1) This category covers television programs that have been produced or co-produced by the Broadcast and Multimedia Unit. The audience estimates are based on available viewer information and include original broadcasts of Rivers: Reflections of Life (CTV affiliates) and repeats of the series It's In Our Nature (Rogers), among other programs. The audience reach was lower than anticipated due to fewer broadcasts of Rivers: Reflections of Life.
- (2) The complete redesign and launch of **nature.ca** in May 2000 combined with over 100 new postings (including four contests and frequent homepage updates) has brought new audiences to the Web site.
- (3) The downward trend continued with no new publications or product being released; *Birds of Canada* in English went out of print during this fiscal year.
- (4) The number of school group visits for fiscal year 2000-2001 is an estimate based on 1999-2000's ratio of participants per group.



# Operating Systems: Human and Technical

The third major goal in 2000-01 was to ensure that all support systems of the institution promote maximum effectiveness and efficiency of operations and enable all work units to maximize their contribution to the service and value of the Museum.

# MAINTAINING AND UPGRADING PHYSICAL FACILITIES

The Victoria Memorial Museum Building has been the home of the Museum since 1910 and has been designated a classified heritage building. However, the last major renovations occurred in 1969-70. The building's deficiencies restrict the Museum's ability to fulfill its programming mandate to Canadians safely, efficiently and economically. Initial funding has been approved from Treasury Board to undertake the planning and design for the essential renovations and repairs to the infrastructure of the Victoria Memorial Museum Building.

The Victoria Memorial Museum Building Masterplan has been developed with special sensitivity to the heritage fabric of the building, public programming initiatives and visitor service amenities. The consultation and planning phase is underway. Interior conservation guidelines have been completed and will be used by the Functional Programmer developing the feasibility study.

An audio upgrade was completed on the auditorium at the Victoria Memorial Museum Building with the installation of a Dolby sound system. This will help ensure the space is competitive with other venues in Ottawa for film festival rentals and similar revenuegenerating activities.

#### PROVIDING THE NECESSARY TOOLS

This year CMN concluded an agreement with FEI System Canada Inc. to acquire a much-needed piece of equipment, an Environmental Scanning Electron Microscope that will enable CMN scientists to perform fine examination of surface sculpture and ornamentation of biological organisms without damaging specimens. CMN is the first museum in Canada to have such a device.

The Collections Information Management System (CIMS) is crucial to achieving our ongoing strategy of updating and contributing CMN data to national and international joint efforts in distributed information networks. Special programming of the system has reduced the time for data extraction and reformatting from a few hours to just 30 to 60 minutes, depending on the complexity of the data request. The move of the MultiMIMSY system to a new faster server significantly increased the efficiency of data entry. As well, a special project by collections staff standardized Canadian place names and contributed to increased data input efficiency.

A database application to catalogue, manage and provide electronic access to the Museum's extensive collection of photographs and images was developed; data input is currently underway. Informatics staff also completed a

### State-of-the-art Equipment



PHOTO: COURTESY OF FEI SYSTEM CANADA INC

This year, the Museum concluded an agreement to acquire a much-anticipated Environmental Scanning Electron Microscope (ESEM). The ESEM will enable CMN scientists to perform fine examination of surface sculpture and ornamentation of biological organisms without damaging specimens. CMN is the first national museum in Canada to have such a device, which was purchased from the FEI System Canada Inc. In addition to allowing the Museum to perform more effectively its highly specialized research, it is hoped that the ESEM will create a research synergy across the country through shared use of this state-of-the-art equipment based on the EM Probe laboratory network.

comprehensive review of the Museum's six major corporate database applications and produced an applications procedures manual to help ensure the secure and reliable performance of these critical corporate information systems.

The Museum selected and began implementation of a new Human Resource and Pay System from J.D. Edwards, following an extensive evaluation and report on available options. The system will become operational in the summer of 2001.

A comprehensive review and redesign of CMN's corporate records holdings and classification system was undertaken in 2000-01. Completion of this project and implementation of the new system is scheduled for early summer 2001.

# PROVIDING OPPORTUNITIES FOR INNOVATION AND GROWTH

CMN's core institutional values are Honesty and Integrity, Respect for People and Nature, the Pursuit of Excellence and Continuous Learning. A cross-departmental team is developing CMN's core competencies and the best approach to evaluating key CMN staff against these competencies. Women now represent 53 percent of the CMN workforce and we have maintained a 50 percent representation of women in senior management. We have also increased our representation of visible minorities to almost three percent of our permanent staff. During the



past year, staff undertook a total of 591 days of training, which equals 3.7 days per employee.

A staff Service Recognition Ceremony and celebration was held on February 27, in the Salon at the Victoria Memorial Museum Building, and 25 employees were

recognized for their 10 to 35 years of service to CMN.

CMN received six interns through the Federal Youth Internship Programme who worked in collections, research and cataloguing providing valuable assistance and gaining job experience.

# RECRUITING AND APPRECIATING VOLUNTEERS

This year CMN had 233 active volunteers. Volunteers provide invaluable assistance in helping the Museum carry out its mandate. All those who expressed an interest in volunteering received information kits and an information and training session was arranged for young volunteers helping with March Break programming. To thank its volunteers, the Museum organized several events during National Volunteer Week last April. They were invited to attend a volunteer appreciation luncheon on May 28 and a special presentation entitled *CMN: A History Made in Canada*. A reciprocal arrangement with the Canadian Museum of Civilization and the Canada Science and Technology Museum allowed our volunteers to visit these institutions for free on April 12.

## Northern Exposure through Video Technology



Interactive video is being used to connect CMN with Nunavut for nature and cross-cultural education, museum training and to demonstrate how new technologies can be used to enhance communications for remote communities. The first transmission took place in September 2000, and has revolutionized communications for remote northern communities. Rather than housing the equipment in a government office, it is located in the high school in the capital of Igloolik, making it accessible to community organizations. The project is a partnership between the Museum, the Inullariit Society of Igloolik, and Consilium, with support coming from Heritage Canada, Agriculture and Agri-Food Canada, the Government of Nunavut and ADCOM Videoconferencing.

Simeonie Kunnuk at the CMN in Ottawa talks to Lucien Ukalinuk in Igloolik (top screen), using the videoconferencing technology.

# Self-generated Revenue

The fourth and final goal of the Museum this past year was to access additional resources in order to enhance its programme of services and its value to Canadians.

The President and the Chairman of the Board continued hosting a series of President's lunches aimed at bringing in community leaders to experience the Victoria Memorial Museum Building and provide feedback on its renewal and open the door to potential donors. The Museum continued to broaden its support base for exhibitions and programmes. Funds and/or in-kind donations were received from the private sector and from foundations, most notably Compaq Canada, Commercial Printers, CS Coop, Davidson's Jewellers, Hurst Marina and Investors Group, the EJLB Foundation, the J.P. Bickell Foundation and the George Lunan Foundation.

The membership programme is an important vehicle for extending value to the community. It has grown by more than 50 percent compared to last year, to over 4,700 members. The programme has benefited from both special promotions handled by Guest Services staff at the Victoria Memorial Museum Building and the national launch via the "Dino Discovery" Web game, supported by a number of private-sector partners, especially VIA Rail Canada.



# FOR THE LOVE OF NATURE CAMPAIGN

As Canada's premier natural history institution, the Museum is launching an aggressive renewal strategy that will strengthen its capacity to serve all Canadians in exciting new ways. To achieve its vision, the Museum is embarking on a major fundraising initiative, For the Love of Nature Campaign, to raise \$10 million. Chaired by business and community leaders Adam and Claudia Chowaniec of Ottawa and supported by a volunteer team, the Campaign will raise funds to support the following priorities:

**Canadian Centre for Biodiversity** – a partnership-building fund to support the establishment of a Biodiversity Secretariat that will play a leadership role in establishing a biodiversity network.

**Nature of Humans Gallery** – a series of programs and travelling exhibitions exploring what it means to be human and our relationship with the natural world, which will lead to the creation of a permanent gallery.

**Fossil Gallery** – a re-creation of the "dino experience" that showcases the richness of Canadian fossil finds while drawing parallels between ancient times and current issues of climate change and extinction.

### Great Canadian Geographic Photo Contest

The Passionate Vision exhibition did more than capture the rugged beauty of our national treasures, it inspired a new category in one of the most successful amateur photography contests held in Canada. A joint venture between the Museum and Canadian Geographic magazine, the Passionate Vision category of the Great Canadian Geographic Photo Contest pays tribute to Dr. Roberta Bondar's exceptional work. The contest, which has been held since 1985, had a record 2,621 photos entered from 980 participants in 2000. Featured here is the Grand Prize Winner — a spectacular view of the Mattawa River Provincial Park in Ontario taken by Darren Makarenko of North Bay, Ontario.



PHOTO: DARREN MAKARENKO





**Oceans Gallery** – permanent exhibitions and broad community outreach initiatives on Canada's oceans and the importance of water as a natural resource to the health of the environment.

**Discovery Centre** – a child and youth-centred initiative that will engage visitors to the exhibitions and national outreach initiatives by increasing their understanding of our natural world and the impact on it of individual behaviour, and by encouraging responsible stewardship of these resources.

**Nature Access Fund** – a new-ventures fund to support the development of community and Internet-based programs and exhibitions that will serve all Canadians.

#### CONTRACTING OUR EXPERTISE

Zooarchaeological Services was launched as a revenuegenerating service to archaeological, biological and wildlife scientific and regulatory agencies. We received our first samples for analysis from the Yukon government of animal bones, primarily caribou, found in association with ancient human tools in the melting glacial ice patches of southern Yukon. Dr. Pak Wong identified 150 lichens from Parc des Pingualuit for the Quebec provincial government.

#### ECO-TOURING

In response to the first successful eco-tour to Costa Rica last spring led by Dr. Robert Anderson, planning is underway for an Arctic fly-fishing tour, a trip to the Arizona Gem Show and a China Dinosaur Tour.

#### SHOWCASING SPECIAL EVENTS

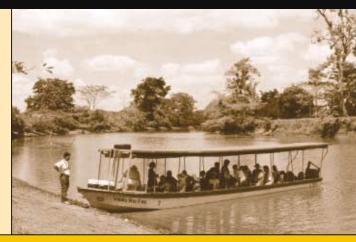
Rental bookings this year were at 95 percent of capacity, generating over \$246,000 in revenue. Major rentals included National Day celebrations for the Embassy of Egypt, the launch of the Ottawa Film Society's fall season, the Ottawa Botanical Society lectures and meetings of the Ottawa Field Naturalists Society.

The museum co-hosted the Philanthropy Awards, at which 300 community leaders gathered to celebrate philanthropy in the National Capital Region.

Interactive video is being used to connect CMN with Nunavut for nature and cross-cultural education, museum training and to demonstrate how new technologies can be used to enhance communications for remote communities. The videoconference demonstration project continued to attract external funding with grants confirmed from the Canadian Rural Partnerships section of Agriculture Canada and the Community Initiatives Program of the Nunavut Department of Sustainable Development.

#### **Eco-tourism Initiative a Hit**

Dr. Robert Anderson led CMN's first "Eco-tour with a Scientist" to Costa Rica from March 25 to April 2, 2000. The expedition included 12 participants from Ottawa, Halifax and Vancouver — individuals whose backgrounds were diverse but who shared a common love of nature and adventure. The tour included a visit to the active Arenal Volcano and the Monteverde Cloud Forest Reserve, a journey up the Cano Negro River and a stay at Manuel Antonio National Park. Among the countless plants and wildlife, participants saw four species of monkeys, the resplendent quetzal, clear-winged butterflies and huge strangler figs. Based on the success of this first tour, plans are underway for tours to the Arctic, the Arizona Gem Show and China.



Eco adventurers arriving in Costa Rica

# "People

The Board of Trustees is CMN's governing body, responsible to Parliament through the Minister of Canadian Heritage. The 11 members of the Board of Trustees are Governor-in-Council appointees from all regions of the country. Through accountability, strategic policy and planning frameworks, the Board provides corporate direction and delegates authority to the President for the management of CMN. In 2000-01 the Board of Trustees met four times and held one conference call. Over 20 meetings of the Committees of the Board were held either in person or through conference calls.

#### **Board of Trustees**

#### Frank Ling

Chair, Rockcliffe Park, Ontario

## Louise Beaubien-Lepage

Vice-Chair, Outremont, Quebec

#### Louis Archambault

Boisbriand, Quebec

# R. Kenneth Armstrong, O.M.C.,

Peterborough, Ontario

#### **Patricia Stanley Beck**

Saskatoon, Saskatchewan

#### Jane Dragon

Fort Smith, NWT

#### José Faubert

Mont-Royal, Quebec

#### Jordan Livingston

Hamilton, Ontario

## Arthur W. May, O.C.,

St. John's, Newfoundland

#### **Garry Parenteau**

Fishing Lake, Alberta

#### Roy H. Piovesana

Thunder Bay, Ontario

#### **Standing Committees**

#### **Executive Committee**

Mandate: The Executive Committee is responsible for monitoring the activities of the Board of Trustees and its Standing Committees, for conducting the President's annual performance review and for evaluating the effectiveness of the governance structure/system. The Executive Committee acts on behalf of the Board between meetings, in accordance with Board policy.

#### **Audit and Finance Committee**

Mandate: The Audit and Finance Committee is responsible for ensuring the Museum's compliance with legal, fiscal and audit requirements established for CMN by the Government of Canada, for recommending additional policies in these areas as appropriate, and for guiding and supporting CMN's efforts to develop a skilled, productive and effective workforce.

#### **Community and Government Relations Committee**

**Mandate:** The Community and Government Relations Committee is responsible for raising and sustaining in the national community a positive awareness of CMN, its services and its contributions, and for guiding and supporting CMN's efforts to generate revenue.

#### Victoria Memorial Museum Building Renovation Committee

Mandate: The Victoria Memorial Museum Building Renovation Committee is responsible for approving the planning, budgeting and reporting processes involved in the renewal project. The Committee ensures transparency in competitive contracting, receives regular updates on the project's progress, and provides progress reports to the Board of Trustees.

## **Management Team**

#### Joanne DiCosimo

President, Chief Executive Officer

#### **Colin Eades**

Vice-President, Chief Operating Officer, Corporate Secretary

#### Denyse Jomphe

Director,

Human Resources Services

#### Lynne Ladouceur

Director,

Financial Management Services

#### Kieran Shepherd

Acting Director,

Collections Services

#### Mark Graham

Director, Research Services

#### Linda Eagen

Director, Development and Fund-Raising Services

#### Elizabeth McCrea

Manager,

Communications Services

#### Mary Ellen Herbert

Manager, Community Services

### **Monty Reid**

Manager, Exhibitions Services

## Greg Smith

Manager,

Information Technology and Library Services

### Gerald Potoczny

Manager,

Facilities Management Services

#### **Bruce Williams**

Manager, Information Services

Darlene Balkwill Micheline Beaulieu-Bouchard Wilda Corcoran Margaret Feuerstack Gerald Fitzgerald Dr. Jean-Marc Gagnon Melanie Gaudet François Génier Michel Gosselin Jennifer Horne April Hurst Clayton Kennedy Marcie Kwidt Sylvie Laframboise Doris Launier Marcie Lawrence Alain McDonald Donna Naughton Michel Picard Judith Price Michael Shchepanek Kieran Shepherd Laura Smyk Michèle Steigerwald Robert Waller Pak Yau Wong

# Communication

Joanne Charette Agnès Chartrand Lucille Fournier Rachel Gervais Hélène Lapointe Elizabeth McCrea Daniel Smythe

#### **Community Services**

Marie-Claude Asselin Stuart Baatnes Luc Barbe Nathalie Benoit

Yannick Blier Anik Boileau Ralph Brassard Sherri Brown Stéphane Bruneau Nathalie Carter Guy Cousineau Jason Coyle Marissa Croteau Charles Diotte Marc Diotte Elizabeth Fortin Patrick Gaag Gerben Gazendam Hugo Gherbavaz Nathalie Gould Laetitia Habimana Kristen Hayes Mary Ellen Herbert Mireille Khacho Tyler Klein John Kubicek Mario Lacasse Guy Larocque Judith Leclerc Robert Leuenberger Stephanie MacDiarmid Lucia Martinez Claire McArthur Thérèse Mitrow Cinthia Moore Charles Nezan Lyanne Payette Davina Pearl Barbora Pek Diane Picard Gilles Proulx Johanne Robin Nathalie Rodrigue Jack Rollin Jennifer-Lee Scott Sonya Searle

Louis-René Sénéchal Randi Shulman Samantha Somers Dahlia Tanasoiu Stacey Tidman Loretto Urguiza Grégoire Villeneuve Michael Yates

# **Development and Fundraising Services**

Linda Eagen Cécile Julien Risë Paquette Roxanne Pigeon Josée Quenneville Susan Swan Marc Villeneuve

#### **Directorate** Irene Byrne

Joanne DiCosimo Colin Eades Carole Leblond Louise Winter

#### **Exhibition Services**

Carol Campbell Nicole Dupuis Jonathan Ferrabee Morag Hutcheson Marie-Claire Payette Monty Reid Leo Saccu Mary Rose Saccu Joanne Sparks Tanya Sproul Carol Thiessen

# **Management Services**

Darrell Daniels André Fortier Heather Hutt Roch Lahaie Martin Leclerc Manon Miller Patrick Minns Jacques Plante Greald Potoczny

# **Financial**

Tony Badmus Stéphane Charlebois Joanne Desnoyers-Shea Lisa Desormeaux Lina Duquay Guy Durand Diane Faucher Lynne Ladouceur Madalena Menezes Liane Monette

# **Human Resources**

Louisa Bouchard Roger Demers Kim De Grandpré Denyse Jomphe Diane Lemieux Antoinette Martin Katja Rodriguez Suzanne Sauvé Lucille Thomas

#### **Information Services**

Nancy Boase Anne-Marie Botman Fiona Currie Peter Frank Jodie Lane Richard Martin Nicole Paquette Andrée Proulx Kathleen Quinn Lorna Sierolawski **Bruce Williams** 

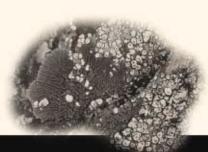
#### **IT & Library Services**

Anne Marie Barter Chantal Dussault Andrée Keohane Myriam Lacasse Greg Smith Patrice Stevenson Ted Sypniewski Michael Wayne James Wilkinson

#### **Research Services**

Dr. Susan Aiken Noel Alfonso Dr. Robert Anderson Lory Beaudoin Alain Bélanger Anne Breau Dr Irwin Brodo Dr. Mike Caldwell Dr. Brian W. Coad Dr. Kathleen Conlan Laurie Consaul Stephen Cumbaa Dr. Hugh Danks Richard Day Catherine Dumouchel Dr. Jaelyn Eberle Dr. Scott Ercit Robert Gault Dr. Lynn Gillespie Susan Goods Dr. Mark Graham Dr. Joel Grice Paul Hamilton Ed Hendrycks Jean Lauriault Jacqueline Madill Dr. André Martel Alison Murray Dr. Michel Poulin Dr. Claude Renaud Dr. Kathleen Stewart Dr. Xiao-Chun Wu

Jonathan Wise



Paying Tribute to Dr. Brodo



Emeritus Researcher Dr. Irwin Brodo formally retired from the Canadian Museum of Nature in the autumn of 2000, marking the end of a 40-year career more aptly termed a labour of love. One of North America's premier lichenologists, Dr. Brodo's work at CMN commenced in 1965 when he was offered the job of curator of lichens. He travelled the country, with numerous visits to British Columbia's Queen Charlotte Islands, collecting more than 5,000 specimens on his journeys. His achievements are countless, including writing over 75 scientific papers and a regional identification guide. He has described dozens of species new to science and new for North America. Although officially retired, Dr. Brodo's work continues to this day. Having completed his magnum opus, Lichens of North America (to be released by Yale University Press in late 2001) he is now occupied with old and new taxonomic research as well as teaching.

# Our Research

# Research Services and Collections Services Staff

CMN staff wrote 53 articles in refereed journals – which have other scientists review all articles submitted before they are accepted for publication – and 25 in non-refereed publications, 15 unpublished documents and 60 other papers. A complete list follows (names in **boldface** are CMN staff members).

#### **Refereed Publications**

Ahnelt, H., A. Abdoli, M. Naderi and **B.W. Coad**. 2000. *Anatirostrum profundorum:* a rare deep-water gobiid species from the Caspian Sea. *Cybium*, 24(2): 139-159, 7 figures.

Akester, R.J. and **A.L. Martel**. 2000. Shell shape, dysodont tooth morphology, and hinge-ligament thickness in the bay mussel *Mytilus trossulus* correlate with wave exposure. *Canadian Journal of Zoology* 78: 240-253.

**Anderson, R.S.** and A.A. Lanteri. 2000. New genera and species of weevils from the Galapagos Islands, Ecuador and Cocos Island, Costa Rica (*Coleoptera; Curculionidae*). *American Museum Novitates* 3299: 15 pp, 41 figures.

**Anderson, R.S.** and J.S. Ashe. 2000. Leaf litter inhabiting beetles as surrogates for establishing priorities for conservation in selected tropical montane cloud forests in Honduras, Central America (Coleoptera; Staphylinidae, Curculionidae). Biodiversity and Conservation 9(5): 617-653.

Burns, P.C., C.M. Clark and **R.A. Gault**. 2000. Juabite, CaCu10( $\text{Te}^{4+}\text{O}_3$ )<sub>4</sub>( $\text{AsO}_4$ )<sub>4</sub>(OH)<sub>2</sub>( $\text{H}_2\text{O}$ )<sub>4</sub>: Crystal structure and revision of the chemical formula. *Canadian Mineralogist*, 38: 809-816.

**Coad, B.W.** 2000. Criteria for assessing the conservation status of taxa (as applied to Iranian freshwater fishes). *Biologia, Bratislava*, 55(5):539-557, 6 figures.

Coad, B.W., J.W. Atz and Y. Keivany. 2000. Fish imagery in art 82: Jonah and the fish. *Environmental Biology of Fishes*, 57(1):9, 1 figure.

**Coad, B.W.** and A. Abdoli. 2000. *Rhinogobius cf. similis* Gill, 1859, a goby new to the fish fauna of Iran and the problem of alien invasions. *Zoology in the Middle East*, 20:55-59, 1 table, 1 figure.

Coad, B.W. and A. Adboli. 2000. Systematics of an isolated population of tooth-carp form northern Iran (*Actinopterygii: Cyprinodontidae*). Zoology in the Middle East, 21:87-102, 2 tables, 4 figures.

**Coad, B.W.** and J. Holčík. 2000. On Silurus species from Iran (*Actinopterygii: Siluridae*). *Folia Zoologia*, 49(2): 139-148, 2 tables, 5 figures.

**Conlan, K. E.,** G. H. Rau, G. N. A. McFeters, and R. G. Kvitek. 2000. Influence of McMurdo Station sewage on Antarctic marine benthos: evidence from stable isotopes, bacteria, and biotic indices. Pp. 315-318 in: Antarctic Ecosystems: Models for wider ecological understanding. Ed. by W. Davison, C. Howard-Williams, and P. Broady. New Zealand Natural Sciences, Caxton Press, Christchurch, New Zealand.

**Danks, H.V.** 2000. Dehydration in dormant insects. *Journal of Insect Physiology* 46(6): 837-852.

**Danks, H.V.** 2000. Insect cold hardiness: A Canadian perspective. *CryoLetters* 21: 297-308.

Danks, H.V. 2000. Measuring and reporting life-cycle duration in insects and arachnids. *European Journal of Entomology* 97(3): 285-303.

Fransolet, A.-M., M.A. Cooper, P. Ĉerný, F.C. Hawthorne, R. Chapman and **J.D. Grice**. 2000. The Tanco pegmatite at Bernic Lake, southeastern Manitoba. XV. Ercitite, NaMn<sup>3+</sup>PO<sub>4</sub>(OH)(H<sub>2</sub>O)<sub>2</sub>. *Canadian Mineralogist*, 38: 893-898.

**Génier, F.** 2000. Dichotomius comarapensis sp. nov., une nouvelle espèce bolivienne de scarabée brachyptère (Coleoptera : Scarabaeidae, Scarabaeinae). Fabreries 25 : 25-31.

**Génier, F.** 2000. A new North American Ateuchus (Weber) (Coleoptera : Scarabaeidae, Scarabaeinae). The Coleopterists Bulletin 54(3) : 341-346.

Gosselain, V. and **P.B. Hamilton**. 2000. Algamica: revisions to a key-based computerized counting program for free-living, attached and benthic algae. *Hydrobiologia* 438: 138-142.

Gosselain, V., **P.B. Hamilton** and J.-P. Descy. 2000. Estimating phytoplankton carbon from microscopic counts: an application for riverine systems. *Hydrobiologia* 438: 75-90.

David, N., and **M. Gosselin**. 2000. The supposed significance of originally capitalized species-group names. Bulletin of the British Ornithology Club 120(4): 261-266.

**Grice, J.D.**, R.A. Gault, A.C. Roberta and M.A. Cooper. 2000. Adamsite-(Y), a new sodium-yttrium carbonate mineral species from Mont Saint-Hilaire, Quebec. *Canadian Mineralogist*, 38: 1457-1466.

Grice, J.D. and G. Ferraris. 2000. New minerals approved in 1999 by the Commission on New Minerals and Mineral Names, International Mineralogical Association. Canadian Mineralogist, 38: 245-250. Also printed in: European Journal of Mineralogy, Mineralogical Magazine, Mineralogical Record, Mineralogy and Petrology, Schweizerische Mineralogische und Petrographische Mitteilungen, Proceedings of the Russian Mineralogical Society and Boletín de la Sociedad Española Mineralogía.

**Grice, J.D.** and P. Dunn. 2000. Crystal-structure determination of pinalite. *American Mineralogist*, 85:806-809.

Groat, L.A., F.C. Hawthorne, **T.S. Ercit** and **J.D. Grice**. 2000. Wiluite,  $Ca_{19}(Al,Mg,Fe,Ti)_{13}(B,Al,\square)_{5}Si_{18} O_{68}(O,OH)_{10}$ , a new mineral species isostructural with vesuvianite, from the Sakha Republic, Russian Federation: A reply. *Canadian Mineralogist* 38: 765-766.

Hamilton, P.B., K. Gajewski, R. McNeely and D.R.S. Lean. 2000. Physical, chemical and biological characteristics of lakes from the Slidre River Basin on the Fosheim Peninsula, Ellesmere Island, Nunavut. In Environmental Response to Climare Change in the Canadian High Arctic, eds. M. Garneau and B.T. Alt. Geological Survey of Canada, Bulletin 529: 235-248.

**Hamilton, P.B.**, H. Kling and M.T. Dokulil. 2000. Guest Editors for Cyanoprokaryotes and chlorophytes across trophic lake status. *Hydrobiologia* 438:142 pp.

Harris, R.C., **I.M. Brodo** and T. Tønsberg. 2000. Lecanora thysanophora, a common leprose lichen in eastern North America. *Bryologist* 103: 790-793.

Hawthorne, F.C., M. Cooper, **J.D. Grice** and L. Ottolini. 2000. A new anhydrous amphibole from the Eifel region Germany: Description and crystal structure of obertiite, NaNa<sub>2</sub>(Mg<sub>3</sub>Fe<sup>3+</sup>Ti<sup>4+</sup>) Si<sub>8</sub>O<sub>22</sub>O<sub>2</sub>. *American Mineralogist*, 85: 236-241.

Li, Y., P.C. Burns and **R.A. Gault**. 2000. A new rare-earth-element uranyl carbonate sheet in the structure of bijvoetite-(Y). *Canadian Mineralogist* 38: 153-162.

Liu, J., **X.-C. Wu**, and J.-L. Li. 2001. The first reptile from the Tongchuan Formation and its stratigraphical significance. *Vertebrata PalAsiatica* 39(1): 67-71.

Martel, A.L., L.M. Auffrey, C. Robles and B.M. Honda. 2000. Identification of settling and early postlarval stages of mussels (Mytilus spp.) from the Pacific Coast of North America, using prodissoconch morphology and genomic DNA. Marine Biology 137-811-818

Mcdonald, A.M., **J.D. Grice** and G.Y. Chao. 2000. The crystal structure of yoshimuraite, a layered Ba-Ti silicophosphate mineral, with comments on five-coordinated Ti<sup>4+</sup>. *Canadian Mineralogist*, 38: 649-656.

**Murray, A.M.** 2000. Eocene cichlid fishes from Tanzania, East Africa. *Journal of Vertebrate Paleontology*, 20(4):651-664.

**Murray, A.M.** 2000. Review of the Palaeozoic, Mesozoic and Early Cenozoic fishes of Africa. *Fish and Fisheries*, 1:111-145.

Perchiazzi, N., A.M. McDonald, **R.A. Gault** and O. Johnsen. 2000. The crystal structure of normandite and its crystal-chemical relationship with låvenite. *Canadian Mineralogist* 38: 641-648.

Petersen, O.V., **R.A. Gault** and S. Jahn. 2000. Kamphaugite-(Y) von der Rössing-Mine *In Namibia, Zauberwelt edler Steine und Kristalle*. Bode Verlag GmbH. pp.136-139.

Phelps, A., **C.B. Renaud** and F. Chapleau. 2000. First record of a Freshwater Drum, *Aplodinotus grunniens*, in the Rideau River, Ottawa, Ontario. *Canadian Field-Naturalist* 114(1): 121-125.

Piilonen, P.C., A.E. Lalonde, A.M. McDonald and **R.A. Gault**. 2000. Niobokupletskite, a new astrophyllite-group mineral from Mont Saint-Hilaire, Quebec: Description and crystal structure. *Canadian Mineralogist* 38: 627-639.

**Poulin, M.**, M. Coste, F. Straub et L. Ector. 2000. Base de données sur les diatomées. *Cryptogamie, Algologie* 21: 257-258.

**Renaud, C.B.** and N. de Ville. 2000. Three records of the Chestnut Lamprey, *Ichthyomyzon castaneus*, new to Quebec. *The Canadian Field-Naturalist* 114(2): 333-335.



Riaux-Gobin, C.P. Tréguer, **M. Poulin** and G. Vétion. 2000. Nutrients, algal biomass and communities in land-fast ice and seawater off Adélie Land (Antarctica). *Antarctic Science* 12: 160-171.

Roberts, A.C., M.A. Cooper, F.C. Hawthorne, J.D. Grice and M.N. Feinglos. 2000. Arakiite, a new Zn-bearing hematolite-like mineral from Långban, Sweden. *Mineralogical Record*, 31: 253-256.

Roberts, A.C., P.C. Burns, **R.A. Gault**, A.J. Criddle, M.N. Feinglos and J.A. R. Stirling. 2001. Paganoite, NiBi<sup>3+</sup>As<sup>5+</sup>O<sub>5</sub>, a new mineral from Johanngeorgenstad, Saxony, Germany: description and crystal structure. *European Journal of Mineralogy*, 13: 167-175.

Robbins, L.H., M. L. Murphy, G. A. Brook, A. H. Ivester, A. C. Campbell, R. G. Klein, R. G. Milo, **K. M. Stewart**, W. S. Downey, N. J. Stevens. 2000. Archaeology, Palaeoenvironment, and Chronology of the Tsodilo Hills White Paintings Rock Shelter, Northwest Kalahari Desert, Botswana. Journal of Archaeological Science 27,11:1085–1113.

**Shchepanek, M.** 2001. In defence of using adhesives and low-temperature control for botanical specimens. Taxon 50: 169-173.

Schultze, H.-P. and **S.L. Cumbaa**. 2001. *Dialipina* and the characters of basal actinopterygians. pp. 315-332 *In: Major Events in Early Vertebrate Evolution: Palaeontology, Phylogeny and Development*. ed. P.E. Ahlberg. Systematics Association Special Volume. Taylor & Francis, London, U.K. 448 pp.

**Stewart, K.M.** and F.L. Stewart. 2001. Prehistoric subsistence and seasonality at Prince Rupert harbour: History and synthesis of zooarchaeological research. pp. 173-202 *In: Perspectives on Northern Northwest Coast Prehistory.* ed. J.S.Cybulski. Canadian Museum of Civilization, Archaeological Survey of Canada, Mercury Series Paper 160. 281 pp.

**Stewart, K.M.** and F.L. Stewart. 2001. Prehistoric subsistence and seasonality at Prince Rupert harbour: History and synthesis of zooarchaeological research. pp. 173-202. *In: Perspectives on Northern Northwest Coast Prehistory.* eds. By J.S. Cybulski. Canadian Museum of Civilization, Archaeological Survey of Canada, Mercury Series Paper 160, 281pp.

Sutcliffe, A.J., W.Blake Jr. with contributions from A. Baker, R. Blackith, B. Ferry, **P. B. Hamilton**, R. Longton, N. Marley, F.L. Miller, D. Pegler, K. Smith and F. Wanless. 2000. Biological activity on decaying caribou antler at Cape Herschel, Ellesmere Island, Nunavut, high Arctic, Canada. *Polar Record* 36: 233-246.

#### Insect Cold Hardiness

How insects cope with the cold of winter is one of Dr. Hugh Danks' primary research interests. Certain species of insects have developed special internal mechanisms to prevent injury at temperatures below freezing: some adapt by making special anti-freezes, while others can protect their cells and membranes while actually frozen. Specific research on detailed responses to cold at the cellular level is being done cooperatively between Dr. Danks and researchers at the University of Victoria, British Columbia and in Halifax, Nova Scotia. This research should lead to a better understanding of how metabolism and other features are regulated in relation to cold hardiness. Such findings would help to illustrate the evolution of cold hardiness as well as to explain the distribution of cold-hardy insects.



Round gall on a stem of golden rod is made by cold-hardy fly larva.

Taner, M.F., **T.S. Ercit** and **R.A. Gault**. 2000. Vanadium-bearing magnetite from the Matagami and Chibougamau Mining Districts, Abitibi, Quebec, Canada. *Exploration and Mining Geology* 7: 299-311.

Taner, M.F., **R. A. Gault** and **T.S. Ercit**. 2000. Vanadium mineralization and its industry in Canada. *The Gangue* 65: 1, 4-8.

Vincent, W.F., J.A.E. Gibson, R. Pienitz, V. Villeneuve, P.A. Broady, **P.B. Hamilton** and C. Howard-Williams. 2000. Ice shelf microbial ecosystems in the high Arctic and implications for life on snowball earth. *Naturwissenschaften* 87: 137-141.

**Wu, X.-C.** and A.P. Russell. 2001. Redescription of *Turfanosuchus dabanensis* (Archosauriformes) and new information on its phylogenetic relationships. *Journal of Vertebrate Paleontology*, 21(1):40-50.

#### Non-refereed Publications

**Anderson, R.S.** 2000. Review of "Weevils, weevils, weevils". 1999. Alonso-Zarazaga, M.A. and C.H.C. Lyal.

**Anderson, R.S.** 2000. Review of "A World Catalogue of Families and Genera of Curculionoidea (*Insecta: Coleoptera*)".1999. Craw, R.C.

Anderson, R.S. 2000. Review of "Fauna of New Zealand". Number 39. 1999. Molytini (Insecta: Coleoptera: Curculionidae; Molytinae). Poiras, A.A.

**Anderson, R.S.** 2000. Review of "Catalogue of the Weevils and their Host Plants in the Republic of Moldava". 1998. *The Celeopterists Bulletin*. 54: 546-547.

Coad, B.W. 2000. Review of "Catalog of Fishes". ed. W.N. Eschmeyer. 1998. California Academy of Sciences, San Francisco. ISBN 0-940228-47-5, 3 volumes + CD-ROM. U.S. \$170. Biodiversity, *Journal of Life on Earth*, Ottawa, 1(3): 40-41.

**Coad, B.W.** 2000. Distribution of *Aphanius* species in Iran. *Journal of the American Killifish Association*, 33(6):183-191, 14 figures.

**Coad, B.W**. 2000. Aphanius ginaonis (Holly, 1929). Holly's pupfish. Journal of the American Killifish Association, 33(6):192-194, 1 figure.

Coad, B.W. and Y. Keivany. 2000. Aphanius vladykovi Coad, 1988. Zagros pupfish, mahi-e gour-e khari. Journal of the American Killifish Association, 33(6):195-198, 2 figures.

**Cumbaa, S.L.** 2000. Colour me red - or yellow or blue. Yes Mag: Canada's Science Magazine for Kids. Issue 19: 18-19.

**Cumbaa, S.L.** 2000. The big time/Il y a longtemps... *Nature Scene/Parlons Nature* Vol. 1(1):2. Canadian Museum of Nature/Musée canadien de la nature. Ottawa

**Danks, H.V.** 2000. Commentaires de clôture : Biodiversité – courants et exigences. *Antennae* 7(1): 11-12.

**Danks, H.V**. 2000. Biological Survey of Canada (Terrestrial Arthropods). *Bulletin of the Entomological Society of Canada* 32(1): 14-18

Danks, H.V. 2000. Biological Survey of Canada (Terrestrial Arthropods). Survey Report. Bulletin of the Entomological Society of Canada 32(3): 58-62

**Gosselin, M.** 2000. Taxonomy of Cave Swalow Petrochelidon fulva. Birders Journal 9(1): 36

**Gosselin, M.** 2000. Likely subspecies of Great Horned Owl present in Whitby, Ont. Birders Journal 9(2): 99

Discovery Channel. (J. Dancosse, J. Eger, P. Myers, **D. Naughton,** and F. Reid, consultants). 2000. Mammals. An Explore Your World Handbook. Discovery Books, New York. 192 pp.

Divi, N., T. Moon, E. Pryzdial and **C. Renaud**. 2000. Anticoagulant activity of buccal gland secretion of *Petromyzon marinus*. Honours project poster, 20 April 2000, Department of Biology, University of Ottawa.

Johnson, M.C. and **M. Poulin**. 2001. Bringing science to the public through biodiversity monitoring: lessons learned from the Rideau River Biodiversity Project. Document presented to the Biodiversity Convention Office, Hull. 38 pp.

Naughton, D. 2000. Bones of known-aged deer: a photo essay of front leg bones. *Canadian Zooarchaeology* 17:5-1

**Naughton, D**. 2000. Bones of known-aged dogs: a photo essay of front leg bones. *Canadian Zooarchaeology* 18:5-1

Phelps, A., F. Chapleau and **C.B. Renaud**. 2000. The Tadpole Madtom, Noturus gyrinus, a rarely seen fish of the Rideau River System, Ontario. *Trail and Landscape* 34(1): 30-34.

**Poulin, M**. 2000. Études des diatomées antarctiques. *Bulletin pour le Réseau canadien de recherches antarctiques* 10: 9-10.

**Poulin, M**. 2000. Studying antarctic diatoms. Newsletter for the Canadian Antarctic Research Network 10: 9-10.

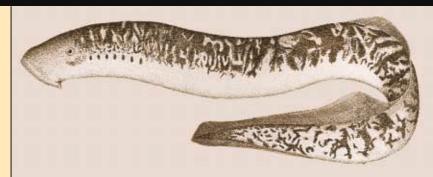
Stewart, K.M. 2000. Editor's Notes. Canadian Zooarchaeology 16:1.

Stewart, K.M. 2000. Editor's Notes. Canadian Zooarchaeology 17:1.



#### Lampreys and Anticoagulants

For the past three years, CMN's Dr. Claude Renaud and two biochemist colleagues, Professor Thomas W. Moon of the University of Ottawa and Dr. Edward L.G. Pryzdial at Canadian Blood Services, have been looking into the mode of action and the chemical characterization of lamphredin, the anticoagulant secreted by the buccal glands of the sea lamprey, *Petromyzon marinus*. Anticoagulants are substances that prevent the clotting of blood, and are used in the treatment of certain heart diseases. In January 2001, the researchers were awarded a one-year \$30,000 grant by the Aventis Behring Canada Research and Education Fund in order to continue their research. Their winning proposal, entitled *A Novel Antithrombin III Replacement*, is exploring the potential pharmaceutical use of lamphredin in humans.



Sea lamprey from eastern North America

#### **Unpublished or Internal Documents**

**Graham, M.** 2000. The Canadian Position on the Global Biodiversity Information Facility: Preparations for the 3rd Interim Steering Committee Meeting. Internal document of the Federal Biosystematics Partnership.

**Graham, M.** 2000. Report on the Global Biodiversity Information Facility: Summary of Activity to Date. Internal document of the Federal Biosystematics Partnership.

**Graham, M**. and B. Fraileigh. 2001. The Canadian Federal Position Regarding the Global Taxonomy Initiative. Prepared for the Biodiversity Convention Office, Environment Canada (for the 6th SBSTTA meeting, Montreal

Hamel, C. et **J. Lauriault**. 2000. [Prospectus]. Séminaire de formation en biodiversité, Niamey, République du Niger, IEPF, UQAM et MCN, *Cahier des intervenants*, 111 p.

Hamel, C. et **J. Lauriault**. 2000. [Prospectus]. Séminaire de formation en biodiversité: N'Djamena, République du Tchad, IEPF, UQAM et MCN, *Cahier des intervenants*, 113 p.

Hamel, C. et **J. Lauriault**. 2000. [Prospectus]. Séminaire atelier national de formation en

biodiversité, Tchad et Niger, Rapport de missions et annexes, UQAM et MCN, 27 p.

Hamilton, P.B., L.M. Ley, G.S. Bouchard, F.R. Pick and M. Poulin. 2000. Phytoplankton Densities and Biomass in the Rideau River, Ottawa River, Constance Lake, Mud Lake and McKay Lake during 1999. Research Division, Canadian Museum of Nature. Technical Report 2000/1: 1-341.

Hamilton, P.B. et M. Poulin. 2001. Identification et dénombrement de cyanobactéries de différents réservoirs et bassins d'eau douce du Quebec. Rapport présenté à l'Institut national de santé publique du Quebec, Beauport. Musée canadien de la nature, Division de la recherche, Ottawa. Rapport technique: 30 p.

Pick, F.R., L.M Ley and **P.B. Hamilton**. 2000. Phytoplankton biomass, composition and size distribution of Kootenay Lake. B.C. following experimental fertilization. Year 8 (1999). Kootenay Lake Fertilization Project Data Report. Prepared for the Fisheries Branch of the British Columbia Ministry of Environment. 15 pp.

Pick, F.R., L.M. Ley and **P.B. Hamilton**. 1999. Phytoplankton biomass, composition and size distribution of Kootenay Lake. B.C. following experimental fertilization. Year 7 (1998). Kootenay Lake Fertilization Project Data Report. Prepared for the Fisheries Branch of the British Columbia Ministry of Environment. 12 pp.

**Poulin, M.** 2001. A multidisciplinary, community-based study of the environmental health of the Rideau River: final report. Report presented to the EJLB Foundation, Montreal. Research Services, Canadian Museum of Nature. Ottawa. 46 pp.

**Stewart, K.M**. 2000. Fauna from Russell's Point, Newfoundland. Report done for Faunal Contract.

**Stewart, K.M**. 2000. Fauna from Site EeBi-42, Newfoundland. Report done for Faunal Contract.

**Waller, R.** 2000. Conservation Assessment of the Florida State Collection of Arthropods, 2000 September 25, 34pp.

**Waller, R.** 2000. Conservation Assessment of the Worcester Natural History Society (EcoTarium). 2000 December 21, 44pp.

#### Other

Abdoli, A., **B. Coad** and M. Naderi. 2000. First record of *Rhinogobius similis*, Gill 1859 in Iran. *Iranian Journal of Fisheries* Sciences, 9(1):73-76, 9. In Farsi, English abstract.

**Aiken, S. G., L.L. Consaul** and M.J. Dallwitz. 2000. Poaceae of the Canadian Arctic Archipelago. 1st edition. Canadian Museum of Nature. 253 pp.



Aiken, S.G., R.L. Boles, and M.J. Dallwitz. 2000. Juncaceae and Liliaceae of the Canadian Arctic Archipelago. www.mun.ca/biology/delta/arcticf

Basciano, L., L.A. Groat, **J.D. Grice, R. A. Gault**, A. Roberts and G. Dunning. 2000. Mineralogy and

crystal structures of barium silicate minerals from Fresno County, California. Geological Association of Canada – Mineralogical Association of Canada Joint Annual Meeting, Calgary, May 28-June 2.

Coupland, G. and **K.M. Stewart**. 2000. Excavations at Prince Rupert Harbour sites, BC. *Canadian Archaeological Association*, Ottawa, May.

Consaul, L.L. and L.J. Gillespie. 2000. A study of key morphological characters in Canadian Arctic Island *Puccinellia* (Poaceae). [Abstract] Proceedings of the *Canadian Botanical Association/Canadian Society of Plant Physiologists Annual Meeting*, London, Ontario, p. 21.

Danks, H.V. 1988. Insects of Canada. Biological Survey of Canada (Terrestrial Arthropods), Document Series no. 1. Published September 2000 on the web at http://www.biology.ualberta.ca/esc.hp/bsc/briefs/ brinsectsofcane.htm

Danks, H.V. 1988. Les insectes du Canada. Comm. biol. Can. (Arth. terrestr.) sér Doc. no. 2. 18 p. Published September 2000 on the web at http://www.biology.ualberta.ca/esc.hp/bsc/briefs/brinsectsofcanf.htm

**Danks, H.V.** and R.A. Ring. 1989. Arctic invertebrate biology: action required. A brief. Published September 2000 on the web at http://www.biology.ualberta.ca/esc.hp/bsc/briefs/brarctic.htm

**Danks**, H.V. 1996. How to assess insect biodiversity without wasting your time. A brief from the Biological Survey of Canada (Terrestrial Arthropods). *Biological Survey of Canada Document Series No. 5*. Published September 2000 on the web at http://www.biology.ualberta.ca/esc.hp/bsc/briefs/brassess.htm

**Danks**, H.V. and N.N. Winchester. 2000. Terrestrial arthropod biodiversity projects - Building a factual foundation. A brief from the Biological Survey of Canada (Terrestrial Arthropods). *Biological Survey of Canada Document Series No. 7*. Published September 2000 on the web at http://www.biology.ualberta.ca/esc.hp/bsc/briefs/ brbio-projects.htm

**Danks, H.V.** 1987. Insect dormancy: an ecological perspective. Biological Survey of Canada (Terrestrial Arthropods), Ottawa. ix + 439 pp. Published September 2000 on the web at http://www.biology.ualberta.ca/esc.hp/bsc/english/insectdormancy.htm

**Danks, H.V.** 1997. The Yukon project. pp. 1-5 in H.V. Danks and J.A. Downes (eds.). Insects of the Yukon. Biological Survey of Canada (Terrestrial Arthropods), Ottawa. x + 1034 pp. Published September 2000 on the web at http://www.biology.ualberta.ca/esc.hp/bsc/pdf/Danks.pdf

**Danks**, H.V., J.A. Downes, D.J. Larson and G.G.E. Scudder. 1997. Insects of the Yukon: characteristics and history. pp. 963-1013 in H.V. Danks and J.A. Downes (eds.). Insects of the Yukon. Biological Survey of Canada (Terrestrial Arthropods), Ottawa. x + 1034 pp. Published September 2000 on the web at http://www.biology.ualberta.ca/esc.hp/bsc/pdf/danksetal.pdf

**Danks, H.V.** and J.A. Downes (eds.). 1997. Insects of the Yukon. Biological Survey of Canada (Terrestrial Arthropods), Ottawa. x + 1034 pp. Published September 2000 on the web at http://www.biology.ualberta.ca/esc.hp/bsc/english/yukon.htm

**Danks**, H.V. (ed.) 2000. Newsletter, *Arthropods of Canadian Grasslands No.* 6. Published September 2000 on the web at http://www.biology.ualberta.ca/esc.hp/bsc/pdf/grasslandsno6.pdf

Danks, H.V. 2000. Biological Survey of Canada (Terrestrial Arthropods). http://www.biology.ualberta.ca/esc.hp/bschome.htm

Danks, H.V. 2000. Biological Survey of Canada (Terrestrial Arthropods): Roles and Responsibilities. http://www. biology.ualberta.ca/esc.hp/bsc/english/roles.htm

Danks, H.V. 2000. Biological Survey of Canada (Terrestrial Arthropods): Structure and Personnel. http://www.biology.ualberta.ca/esc.hp/bsc/ english/personnel.htm

Danks, H.V. 2000. Biological Survey of Canada (Terrestrial Arthropods): Publications. http://www.biology.ualberta.ca/esc.hp/bsc/english/ publications.htm

Danks, H.V. 2000. Biological Survey of Canada (Terrestrial Arthropods): Scientific Projects. http://www.biology.ualberta.ca/esc.hp/bsc/english/ scientificprojects.htm

Danks, H.V. 2000. Biological Survey of Canada (Terrestrial Arthropods): Canada's Insect Fauna. http://www.biology.ualberta. ca/esc.hp/bsc/english/ insectfauna.htm

Danks, H.V. 2000. Biological Survey of Canada (Terrestrial Arthropods): Biological Survey Foundation. http://www.biology.ualberta.ca/esc.hp/ bsc/english/bsf.htm

Danks, H.V. 2000. Commission biologique du Canada (Arthropodes terrestres): http://www.biology.ualberta.ca/esc.hp/ cbchome.htm

Danks, H.V. 2000. Commission biologique du Canada Arthropodes terrestres): Rôles et responsabilités. http://www.biology. ualberta.ca/ esc.hp/bsc/french/frroles.htm

> Danks, H.V. 2000. Commission biologique du Canada (Arthropodes terrestres): Organisation et personnel. http://www.biology.ualberta.ca/esc.hp/ bsc/french/frpersonnel.htm

Danks, H.V. 2000. Commission biologique du Canada (Arthropodes terrestres): Publications. http://www.biology.ualberta.ca/ esc.hp/bsc/french/frpublications.htm

Danks, H.V. 2000. Commission biologique du Canada (Arthropodes terrestres): Projets de recherche. http://www.biology. ualberta. ca/esc.hp/bsc/french/frscientific projects.htm

Danks, H.V. 2000. Commission biologique du Canada (Arthropodes terrestres): La faune entomologique du Canada. http://www.biology. ualberta.ca/esc.hp/bsc/ french/frinsectfauna.htm

Danks, H.V. 2000. Commission biologique du Canada (Arthropodes terrestres): Biological Survey Foundation. http://www.biology.ualberta.ca/esc.hp/bsc/french/frbsf.htm

Danks, H.V. (ed.) 2000. Newsletter of the Biological Survey of Canada (Terrestrial Arthropods) 2000. 19(2): 35-65 was published on the web at http://www.biology.ualberta.ca/esc.hp/bsc/news\_19\_2/contents.htm

Danks, H.V. (ed.) 2000. Arctic Insect News No. 11, 31 pp. was published on the web at: http://www.biology.ualberta.ca/esc.hp/ bsc/pdf/ain11.pdf

Danks, H.V. and N.N. Winchester. 2000. Terrestrial arthropod biodiversity projects - building a factual foundation. A brief from the Biological Survey of Canada (Terrestrial Arthropods). Biological Survey of Canada Document Series No. 7, ISBN 0-9692727-9-0. 38 pp.

Danks, H.V. (ed.) Newsletter of Biological Survey of Canada (Terrestrial Arthropods) 2000. 19(2): 35-65.

Danks, H.V. (ed.) Newsletter of Biological Survey of Canada (Terrestrial Arthropods) 2001, 20(1): 1-38.

Danks, H.V. (ed.) Arctic Insect News No. 11, 2000, 31 pp.

Danks, H.V. (ed.) Newsletter, Arthropods of Canadian Grasslands No. 7, 2001, 31 pp

Eberle, J. 2000. Life Goes On for the Mammals after Dinosaur Extinction. Web site: http://www.dmnh.org/denverbasin2/dbas2.htm

Eberle, J. 2001. Urban Palaeontology In America. Web site:www.nature.ca/discover/field/eberle/2000/denvrl\_e.cfm

Ercit, T.S. 2000. Internet resources for curators and locality collectors. Rochester Mineralogical Symposium, Rochester, NY.

Galloway, T.D. and H.V. Danks. 1991. Arthropod ectoparasites of vertebrates in Canada. A brief. Published September 2000 on the web at http://www.biology.ualberta.ca/esc.hp/bsc/briefs/brarthro.htm

Gillespie, L.J., R.L. Boles and L.L. Consaul. 2000. xPucciphippsia in the Canadian Arctic: molecular evidence for intergeneric hybrid status. [Abstract] Proceedings of the Canadian Botanical Association/ Canadian Society of Plant Physiologists Annual Meeting, London, Ontario, p. 22.

Graham, M. 2000. National Museum Update. Bulletin of the Canadian Society of Zoology, 31(3):24-25.

### Investigating the Flora of the Canadian Arctic



Dr. Susan Aiken and five colleagues working on Flora of the Canadian Arctic Archipelago produced volume one (Pteridophytes and Monocotelydons of the Canadian Arctic Archipelago: Descriptions, Illustrations, Identification and Information Retrieval) of a two-part series that investigates the approximately 400 species of flowering plants that occur in the Canadian Arctic Archipelago. The information contained in volume one was released on the University of Newfoundland Web site and was also made available in CD-ROM format for review purposes. In total, 10 authors are involved in the project that has prepared treatments of some of the dicotelydon families that occur in the Arctic. The project is closely linked with the Panarctic Flora checklist that has involved exchange visits between Norway and Canada to standardize the species concepts and the names being used for plants in seven circumpolar arctic countries.

Figure 2 - Publications

CMN Staff	2000-01	1999-00
Refereed Publications	53	51
Non-refereed Publications	25	18
Unpublished or Internal Documents	15	7
Other	60	24

Grice, J.D. 2000. Borate minerals from New Brunswick, Canada. Mineral and Museums Conference. Melbourne, Australia. December 4-7.

Groat, L.A., T.S. Ercit, D.D. Marshall, R.A. Gault, M.A. Wise, W. Wengzynowski and W.D. Eaton. 2001. Canadian Emeralds: The Crown Showing, Souteastern Yukon. Newsletter of the Mineralogical Assoc. of Canada 63:1, 12-13.

Lehmkuhl, D.M., **H.V. Danks,** V. M. Behan-Pelletier, D. J. Larson, D. M. Rosenberg, I. M. Smith. 1984. Recommendations for the appraisal of environmental disturbance: some general guidelines and the value and feasibility of insect studies. Published September 2000 on the web at http://www.biology.ualberta.ca/esc.hp/bsc/briefs/brrecomm.htm

Marshall, S.A., **R.S. Anderson**, R.E. Roughley, V. Behan-Pelletier and **H.V. Danks**. 1994. Terrestrial arthropod biodiversity: planning a study and recommended sampling techniques. A brief. Published September 2000 on the web at http://www.biology.ualberta.ca/esc.hp/bsc/briefs/brterrestrial.htm

Martel, A.L., D.A. Pathy, J. Madill, C.B. Renaud, S.L. Dean and S.J. Kerr. 2000. Demise of a freshwater mussel community (*Unionidae*) in a small river system: Paying the price for introducing an exotic species. 39th Annual Meeting of the Canadian Society of Zoologists, 2-6 May 2000, St. Andrews, New Brunswick, Bulletin 31(2): 83 (abstract).

Martel, A.L., D.A. Pathy, J. Madill, C.B. Renaud, S.L. Dean and S.J. Kerr. 2000. Extirpation of freshwater mussel (Unionidae) taxa in the northern part of the Rideau River, eastern Ontario: urbanization followed by introduction of an exotic species. Abstract, p. 17. In: Ecological Monitoring and Assessment Network 6th National Science Meeting, 18-22 January 2000, Toronto, Ontario.

May, P.F. and **I.M. Brodo**. 2000. Identifying North American Lichens: A Guide to the Literature [on line]. Farlow Herbarium, Cambridge, MA. Available: http://www.herbaria.harvard.edu/Data/Farlow/lichenguide/index.html

**Murray, A.M.** 2000. The Eocene cichlids (Perciformes: Labroidei) of Mahenge, Tanzania. Ph.D. thesis, Department of Biology, McGill University, 200 pp.

**Poulin, M.** et D.M. Williams. 2000. [Résumé] Une perspective de conservation de la biodiversité des diatomées. *Cryptogamie*, *Algologie* 21: 233-234.

**Poulin, M., P.B. Hamilton** et C. Billington. 2000. [Résumé] La biodiversité de la rivière Rideau, une étude pluridisciplinaire selon une approche communautaire. *Cryptogamie, Algologie* 21: 234-235.

Rippley, K and **P.B Hamilton.** 2000. Diatoms: microscopic messengers Yes Mag (Spring) pp. 8-11.

Scott, P.J., **S.G. Aiken**, R.L. Boles, and M. J. Dallwitz. 2000. Ranunculaceae of the Canadian Arctic Archipelago. www.mun.ca/biology/delta/arcticf

**Stewart, K.M.,** G. Coupland and **D. Naughton**. 2000. Preliminary results from Auger screening at Prince Rupert Harbour sites. *Canadian Archaeological Association*, Ottawa, May.

**Waller, R.** 2000. Risk Assessment and conservation planning at the Canadian Museum of Nature. Society for the Preservation of Natural History Collections Program and Abstracts of the 15th Annual Meeting, p. 49.

Williams, D.D., **H.V. Danks,** I.M. Smith, R.A. Ring and R.A. Cannings. 1990. Freshwater springs: a national heritage. A brief. Published on the web at http://www.biology.ualberta.ca/esc.hp/bsc/briefs/brfreshwater.htm, September 2000

# Research Associates

#### **Refereed Publications**

Cook, F. R., Editor. The Canadian Field-Naturalist 114(2): 187-350.

Cook, F.R., Editor. The Canadian Field-Naturalist 114(3): 351-554.

Holmes, R. 2000. Palaeozoic temnospondyls. eds. H. Heatwole and R.L. Carroll. In: Amphibian Biology. Vol. 4, Palaeontology: the evolutionary history of amphibians. Surrey Beatty & Sons, Chipping Norton, NSW, Australia. pp. 1081-1120

McDonald, H.G., **C.R. Harington**, and G. De Iuliis. 2000. The ground sloth *Megalonyx* from Pleistocene deposits of the Old Crow Basin, Yukon, Canada. Arctic 53(3): 213-220.

#### **Non-refereed Publications**

Blake, W. Jr., **C.R. Harington** and G. Hattersley-Smith. 2000. Obituary of Robert Loring Christie. *Polar Record* 36(199): 365-367.

**Cook, F.R.,** Editor's report for volume 113 (1999). *The Canadian Field Naturalist* 114(2): 339-341.

Holmes, R. 2001. Review of Benton, M.J. Vertebrate Palaeontology, 2nd ed. Palaeogeography, Palaeoclimatology, Palaeoecology 166: 423-424.

#### Other

**Harington, C.R.** 2000. Quaternary vertebrates of Quebec: a summary. *In*: Premier colloque sur le patrimoine géologique du Quebec, Montreal. Cahier des resumés. pp. 9-10

**Harington, C.R.,** J.A. Leonard, R.K. Wayne and A. Cooper. 2000. Ancient DNA: studies of Late Pleistocene mammal bone from Sixtymile, Yukon, Canada. 31st International Geological Congress, Rio de Janeiro. [abstract].

#### Research Associates

T. Anderson, Nepean, Ontario

G. Argus, Merrickville, Ontario

F. Brodo, Ottawa, Ontario

I. Brodo, Ottawa, Ontario

M. Caldwell, Dept. of Biological Sciences, University of Alberta, Edmonton, Alberta

F. Chapleau, Dept. of Biology, University of Ottawa, Ottawa, Ontario

F. Cook, North Augusta, Ontario

H. Dompierre, Farrelton, Quebec

J.A. Downes, Ottawa, Ontario

J.M. Gillett, Ottawa, Ontario

W.E. Godfrey, Nepean, Ontario

D.R. Gray, Metcalfe, Ontario

E. Haber, Ottawa, Ontario

R. Harington, Gloucester, Ontario

L.V. Hills, Dept. of Geology and Geophysics, University of Calgary, Calgary, Alberta

R.B. Holmes, Vanier College, Montreal, Quebec

A.T. Howden, Nepean, Ontario

H.F. Howden, Nepean, Ontario

D. Leaman, IUCN Medicinal Plant Specialist Group, Ottawa, Ontario

D. McAllister, Perth, Ontario

F. Schueler, Eastern Ontario Biodiversity Museum, Kemptville, Ontario

**C.-T. Shih,** Research Associate, Institute of Oceanography, National Taiwan University, Taipei, Taiwan, Republic of China

W. Wight, Ottawa, Ontario

# INVOLVING THE Lommunit

# Sponsors, Donors, Partners

The financial support of our sponsors enables the Museum to increase public offerings while involving the community. Sponsors generally designate funds to a special project, programme or event with which their name will be associated in all promotional materials and activities. Such sponsorship may include gifts of time, services or gifts-in-kind (equipment, material and so on).

Donors are individuals, corporations, foundations or granting agencies that make or pledge a charitable donation to the Museum. The generous support and involvement of our donors helps CMN to play a leading national role in the areas of research, collections and public programming about our natural history.

Accurate Building and Air Cleaning, Ottawa, Ontario

Aiken, Susan, Nepean, Ontario

Albert at Bay Suites, Ottawa, Ontario

Algonquin College, Nepean, Ontario

AMJ Campbell Van Lines, Ottawa, Ontario

**Armstrong, R. Kenneth**, Peterborough, Ontario Association of Science and Technology Centres,

Washington, DC

Australian High Commission, Ottawa, Ontario

Bamfield Marine Station. Bamfield. British Columbia

Barrett, Robert, Mississauga, Ontario Behnk, Sabine, Waterloo, Ontario

Bertin, Connie, Stittsville, Ontario

Best Western Victoria Park Suites.

Ottawa, Ontario

BHP Diamonds Inc., Vancouver,

British Columbia

The J.P. Bickell Foundation, Toronto, Ontario Biodôme de Montreal, Montreal, Quebec

Bird, Ann, Ottawa, Ontario

Bird, Phillip, Ottawa, Ontario

Blusson, S.

Bogart, James P., Department of Zoology, University of Guelph, Guelph, Ontario

Bowen, Patricia, Ottawa, Ontario

Broulik, Majka, Ottawa, Ontario

Brunet, Pauline, Hull, Quebec

Bytown Travel Ltd., Ottawa, Ontario

Canada Dance Festival, Ottawa, Ontario

Canada Science and Technology Museum,

Ottawa, Ontario

Canadian Ecology Centre, Mattawa, Ontario Canadian Geographic Magazine, Vanier, Ontario Canadian Heritage, Government of Canada,

Ottawa, Ontario

Canadian Museum of Civilization, Hull, Quebec Canadian Olympic Association, Ottawa, Ontario Canadian Parks Partnership, Calgary, Alberta

Canadian Tulip Fesitval, Ottawa, Ontario

Capital Double Decker & Trolley Tours,

Ottawa, Ontario

Céré, Michel, Hull, Quebec

Charette, Joanne, Cantley, Quebec

Cheel, Stephen, Ottawa, Ontario

CHOT/TQS, Hull, Quebec

CIMF, Hull, Quebec

Cineplex Odeon, World Exchange Plaza,

Ottawa, Ontario

CJOH - CTV, Nepean, Ontario Cognos Incorporated, Ottawa, Ontario

Collins, Lorne, Wildland Video Productions

Commercial Printers Limited, Ottawa, Ontario

Compaq Canada Inc., Kanata, Ontario

Cooper, Dorothea E., Greely, Ontario

Cowan, Terry, Nepean, Ontario

CS CO-OP, Ottawa, Ontario

Curtis, Bruce, Comox, British Columbia

Dafoe, Joe, Nepean, Ontario

Danks, Hugh, Ottawa, Ontario

Davidson's Jewellers, Ottawa, Ontario

Defronzo, Rosa, Ottawa, Ontario

Desser, Sherwin S., Department of Zoology,

University of Toronto, Toronto, Ontario Dia Met Minerals Ltd., Vancouver,

British Columbia

DiCosimo, Joanne, Aylmer, Quebec

Dowling, Mike, Kanata, Ontario Dunsmore, Margaret, Ottawa, Ontario

Eastern Ontario Model Forest,

Kemptville, Ontario

EcoMusée de Hull, Hull, Quebec

The EJLB Foundation, Montreal, Quebec

Emond Harnden, Ottawa, Ontario

Ernst & Young, Ottawa, Ontario

Farley, Benoit, Hull, Quebec

Fielding, Ray R., Pleasantville, Nova Scotia

Fipke, Chuck E.

Fitzgerald, Gerald, Ottawa, Ontario

Foreign Affairs and International Trade, Government of Canada, Ottawa, Ontario Fuji Photo Film Canada Ltd.,

Mississauga, Ontario

Gagnon, Sylvio, Ottawa, Ontario

Galeries Aylmer, Aylmer, Quebec

Gatineau Park, NCC, Hull, Quebec

Gatorade, Peterborough, Ontario

Gauthier, Robert, Herbier Louis-Marie, Université Laval, Sainte-Foy, Quebec

Génier, Yvon, St-Alphonse-de-Rodriguez, Quebec

Gill, Bruce D., Woodlawn, Ontario

Ginn, Brian, Department of Biology, University

College of Cape Breton, Sydney, Nova Scotia Glissades du Lac-des-Fées, Hull, Quebec

Glossop, Maggie, Ottawa, Ontario

Gloucester Splash Wave Pool, Gloucester,

Golden, Eleanor, Ottawa, Ontario

The Golf Market, Ottawa, Ontario

Golf Mont Cascades, Cantley, Quebec Gowling Lafleur Henderson, Ottawa, Ontario

Great Adventures People, Ottawa, Ontario

Groupe Conseil CDL, Montreal, Quebec

Hanna, Magda, Aylmer, Quebec

Health Canada, Ottawa, Ontario

Herbert, Mary Ellen, Ottawa, Ontario

Hill, Laurie, Ottawa, Ontario

Hostelling International, Ottawa, Ontario

Howden, Henry and Anne, Nepean, Ontario Hurst Marina Ltd., Manotick, Ontario

Hutchinson, Mr.

Imperial Oil Charitable Foundation.

Toronto, Ontario

Investors Group Inc., Winnipeg, Manitoba

Jean, Jacinte, San Diego, California

Jenkins, Victoria Carleton Place Ontario

Jephcott, Susan, Vankleek Hill, Ontario

Johnson, David Bruce, Nepean, Ontario

Julien, Cécile, Orléans, Ontario

Kaiser, Gary. Pacific Wildlife Research Centre.

Environment Canada, Delta, British Columbia

Kanata Leisure Centre and Wave Pool, Kanata, Ontario

Kelly, Jeffrey B., Ottawa, Ontario

Kikuchi, Shinran Mitsugi, Richmond, Ontario Komarnisky, Deborah, Ottawa, Ontario

La Violette, Nathalie, Direction des écosystèmes aquatiques, Ministère de l'environnement du Quebec, Quebec, Quebec

Labrosse, Claire, Gatineau, Quebec Ladouceur, Lynne, Gatineau, Quebec Laser Quest, Ottawa, Ontario

Lavoie, Hélène, Aylmer, Quebec Le Droit, Ottawa, Ontario

Légaré, Benoit, Pêches et Océans, Institut Maurice Lamontagne, Mont-Joli, Quebec

Lego Canada Inc., Markham, Ontario Lepage, Ben A., Earth and Environmental Sciences, University of Pennsylvania,

Philadelphia, Pennsylvania

Leuenberger, Robert and Donata, Vars, Ontario

Ling, Frank, Ottawa, Ontario

Loonen, Yohanna, Ottawa, Ontario Lord Elgin Hotel, Ottawa, Ontario

The George Lunan Foundation, Toronto, Ontario

Macartney, Susan, Ottawa, Ontario

MacDonald-Zytveld, Catherine, Ottawa, Ontario Majic 100, Ottawa, Ontario

Marsh Canada Limited, Ottawa, Ontario May, Arthur, St. John's, Newfoundland

McClintock, Jim, School of Natural Sciences & Mathematics, University of Alabama at Birmingham, Birmingham, Alabama

McDonald, Tom, Pacific Biological Station, Fisheries and Oceans, Nanaimo, British Columbia

McNair, Douglas B., Tall Timbers Research Station, Tallahassee, Florida

Michaud, Lilianne, Gatineau, Quebec Monterey Inn, Ottawa, Ontario

Natural Resources Canada, Ottawa, Ontario

Nature Boutique, Ottawa, Ontario

OC Transpo, Ottawa, Ontario

Oldham, Michael J., Natural Heritage Information Centre, Ministry of Natural Resources, Peterborough, Ontario

**Ontario Parks** 

Ottawa Chamber Music Festival, Ottawa, Ontario

The Ottawa Citizen, Ottawa, Ontario Ottawa Lions Track and Field Club, Ottawa, Ontario

Paihomesai, Finian, Kemptville, Ontario Paquette, Risë, Breckenridge, Quebec

Parker, Carolyn, University of Alaska Museum, Fairbanks, Alaska

Parks Canada, Hull, Quebec

Passionate Vision, Toronto, Ontario

Paul's Boat Line, Nepean, Ontario

Peck, Stewart B., Ottawa, Ontario

Perrier, Thérèse, Masson-Angers, Quebec

Pilon Limitée, Ottawa, Ontario

Poly, William J., Department of Zoology, Southern Illinois University, Carbondale, Illinois

Polygone Inc., Hull, Quebec

**Public Works and Government Services** Canada, Ottawa, Ontario

The Quaker Oats Company of Canada Limited, Peterborough, Ontario

Quenneville, Josée, Rockland, Ontario Ramsay, Robert, Ottawa, Ontario

Rask Møller, Peter, Zoological Museum of Copenhagen, Copenhagen, Denmark

Raymond, Georges, Gatineau, Quebec Reiswig, Henry M., Redpath Museum, McGill University, Montreal, Quebec

RG Webb Consulting, Ottawa, Ontario Richards, Charles, Sutton, Quebec

Robert, Michel, Service canadien de la faune, Ste-Foy, Quebec

Rota, Emilia, Dipartimento di Biologia Evolutiva, Universita' di Siena, Sienna, Italy Routhier, Chantal, Biodôme de Montreal,

Montreal, Quebec Rowson, Frances, Ottawa, Ontario

Royal Bank of Canada, Ottawa, Ontario Royal Ontario Museum, Toronto, Ontario Salamander Foundation, Toronto, Ontario Salon de quilles Anik, Hull, Quebec Sato, Go, Ottawa, Ontario

Schaubel, Alan, Oakville, Ontario Seaborn, Catherine, Ottawa, Ontario

Smith, Fredrick Graham, Ottawa, Ontario Société de transport de l'Outaouais, Hull, Quebec

Société des établissements de plein-air du Quebec

Somerset Pub, Ottawa, Ontario Speedo

Stanley Beck, Patricia, Saskatoon, Saskatchewan

Students on Ice, Ottawa, Ontario Surgenor Pontiac Buick, Ottawa, Ontario

Taillon, André, Gatineau, Quebec

TAPP Consulting, Merrickville, Ontario

Tea & Tole, Aylmer, Quebec

Thatcher, K.M.A., Almonte, Ontario

Toys 'R' Us, Ottawa, Ontario

Trans Canada Trail Foundation, Montreal, Ouebec

Valan Photos, Clayton, Ontario

VIA Rail Canada Inc., Montreal, Quebec

Ville d'Aylmer, Aylmer, Quebec

Winterlude, Ottawa, Ontario

Wood, James B., Department of Biology, Dalhousie University, Halifax, Nova Scotia

Woodyard, Patty, Ottawa, Ontario

Wright, Patricia, Toronto, Ontario Wyndham, Campbell,

Carleton University, Ottawa, Ontario

Youssef, Mona. Ottawa, Ontario

#### **Investors Group Passionate About Nature**

Thanks to the generous support of Investors Group, and with assistance from the Millennium Bureau of Canada, Dr. Roberta Bondar's Passionate Vision: Intimate Portraits of Canada's National Parks was presented at CMN between June and October, 2000. The 360-square metre exhibition – which featured 108 unpublished photographs taken by the renowned astronaut – celebrated the natural splendour of our 41 national parks. "Canada's national parks are a great source of pride for Canadians," said H. Sanford Riley, President and CEO of Investors Group. "We are proud to join with the Canadian Museum of Nature in saluting Dr. Roberta Bondar on her incredible accomplishment." In addition to its display at the Victoria Memorial Museum Building, the Passionate Vision exhibition travelled to the Royal Ontario Museum in Toronto, and will continue its cross-Canada tour until 2002 and beyond.



# **Collaborators**

Collaborators are individuals or organizations such as universities, research institutes, museums and government agencies that cooperate with CMN on a range of research activities, projects and exhibitions. These affiliations are part of CMN's national and international networking to further the work of the Museum and share its resources with others.

#### INTERNATIONAL

American Museum of Natural History, New York, New York, Department of Vertebrate Paleontology

Australian High Commission, Ottawa, Canada Booth Museum, Brighton, United Kingdom California Academy of Sciences,

San Francisco, California, Department of Invertebrate Zoology and Geology

California State University: Los Angeles; Monterey; Moss Landing Marine Laboratories Carnegie Museum, Pittsburgh, Pennsylvania

**Chinese Academy of Geological Sciences**, Beijing, The People's Republic of China, Geological Institute

Chinese Academy of Sciences, Beijing, The People's Republic of China, Institute of Vertebrate Paleontology and Paleoanthropology Chongqing History Museum, Chongqing, The

People's Republic of China, Cornell University, Ithaca, New York CSIRO, Canberra, Australia, Entomology

**Denver Museum of Nature and Science**, Denver, Colorado

**Department of Fish and Wildlife**, Fairbanks, Alaska

Duke University, North Carolina

EARTH, Costa Rica

Fort Hays State University, Hays, Kansas George Washington University, Washington, DC Global Biodiversity Information Facility, Ottawa. Ontario

**Global Taxonomy Initiative**, Ottawa, Ontario **Goward, T.**, Australia

IUCN, World Conservation Institute: Medicinal Plan Specialist Group; Species Survival Commission, Ottawa, Ontario Illinois State Museum, Springfield, Illinois Institut royal des Sciences naturelles de Belgique, Brussells, Belgium

**Instituto Nacional de Biodiversidad**, Santo Domingo, Costa Rica

**Laboratoire Arago**, Banyuls-sur-mer, France **Murdoch University**, School of Biological Sciences and Biotechnology, Australia

Museo de Historia Natural de la Ciudad de Mexico, Mexico City, Mexico

Museo de La Plata, La Plata, Argentina Museum für Naturkunde der Humboldt-Universität, Berlin, Germany, Institut für Paläontologie,

 $\label{eq:National Museum of Kenya} \textbf{National Science Foundation}, \textbf{Washington}, \textbf{DC}$ 

**Natural History Museum**, Los Angeles, California, Vertebrate Paleontology,

New York University, New York, New York North Carolina State University, Raleigh, North Carolina, Department of Marine, Earth, and Atmospheric Sciences

**Northwest University**, Xi-an, The People's Republic of China

PanArctic Flora Project, Norway

Pontificia Universidad Católica del Ecuador, Ouito. Ecuador

**Royal Botanic Garden Herbarium**, Kew, London, United Kingdom

Russian Academy of Sciences, Moscow, Russia Rutgers University, New Brunswick,

New Jersey
Scripps Institution of Oceanography,

San Diego, California Sharnoff, S., Berkeley, California

**Smithsonian Institute**, Washington, DC, Department of Mineral Sciences

**Southampton Oceanography Centre**, Southampton, United Kingdom

St. Lawrence University, Canton, New York Stanford University Stanford California

**Stanford University**, Stanford, California, Department of Geological and Environmental

**State University of New York**, Stony Brook, New York

The Natural History Museum, London, United Kingdom, Department of Botany

**Université de Nantes**, Nantes, France, Laboratoire de biologie marine

**University of Alabama**, Alabama, Department of Biological Sciences

**University of Alaska**, Fairbanks, Alaska, Department of Biological Sciences

**University of Barcelona**, Barcelona, Spain, Department of Botany

University of California: California Institute of Marine Sciences, Santa Cruz; Department of Archaeology, Santa Cruz; Museum of Paleontology, Berkeley; Veterinary Genetics Laboratory, Davis

**University of Copenhagen**, Copenhagen, Denmark, Geologisk Museum and Zoological Museum

**University of Kansas**, Lawrence, Kansas, Department of Entomology

**University of North Carolina**, Durham, North Carolina

**University of Oslo**, Oslo, Norway, Botany Museum

Western Washington University, Bellingham, Washington,

Department of Geology

Yale University Press, New Haven, Connecticut

These Diamonds Are Forever

Diamonds in the Rough, a display featuring a gift of seven diamonds from the Ekati Mine in the Northwest Territories, opened in January 2001. Ekati is the first economically exploitable primary source of diamonds under Canadian soil. The invaluable addition to CMN's Earth Sciences Collection – including one diamond in excess of 27 carats – was given by the mine's owners and operators: BHP Diamonds Inc., Dia Met Minerals Ltd., Chuck E. Fipke and Dr. S. Blusson. The initiative was also supported by Compaq Canada and Davidson's Jewellers, the latter contributing a Canadian diamond pendant for a special draw held in conjunction with the event.

Ekati Diamond Mine President, Jim Excell (left), with CMN President and CEO, Joanne DiCosimo, and Dia Met Minerals Ltd. Chairman, Peter Atkinson, participate in the unveiling of *Diamonds in the Rough* display.



DTO: MARTIN LIPM

#### NATIONAL

#### **ADCOM Videoconferencing**

Agriculture and Agri-Food Canada, Ottawa, Ontario: Canadian Rural Partnerships; Eastern Cereal and Oilseed Research Centre (ECORC); Lethbridge Research Centre

Alpine Gems, Kingston, Ontario

**APEX** (Association of Professional Executives of the Public Service of Canada), Ottawa, Ontario

**Apqut Training and Employment Programs**, Kakiyak Association

**Archaeological Survey of Canada**, Canadian Museum of Civilization, Hull, Quebec

Art Gallery of Ontario, Toronto, Ontario Atlantic Low Temperature Systems Ltd, Dartmouth, Nova Scotia

Biodôme, Montreal, Quebec

**Bird Studies Canada**, Port Rowan, Ontario **Canada's Digital Collections Program**,

Ottawa, Ontario

Canada's SchoolNet, Ottawa, Ontario Canadian Association of Principals, Ottawa, Ontario

Canadian Biodiversity Institute

Canadian Blood Services, Ottawa, Ontario

Canadian Botanical Association, Ottawa, Ontario Canadian Heritage, Ottawa, Ontario: Canadian Heritage Information Network, Hull, Quebec;

Museums Assistance Program, Hull, Quebec Canadian Museums Association, Ottawa, Ontario

Canadian Parks Partnership, Calgary, Alberta Canadian Rivers Management Society Canadian Society of Zoologists

Canadian Wildlife Federation, Ottawa, Ontario Centre for Traditional Knowledge,

Aylmer, Quebec

Citizenship and Immigration Canada, Ottawa, Ontario

Comité de valorisation de la Rivière Beauport, Beauport, Quebec

**Ducks Unlimited Canada**, Stonewall, Manitoba, Institute for Wetland and Waterfowl Research Environment Canada: Biodiversity Convention Office, Ottawa, Ontario; La Biosphère, Montreal, Quebec; Canadian Wildlife Service, Ottawa, Ontario; Marine Environment Division, Ottawa, Ontario; National Water Research Institute, Burlington, Ontario; Outreach Programmes, Ottawa, Ontario

**Expatriate Resources and Archer-Cathro Ltd.**, Whitehorse, Yukon Territory

Federal Biosystematics Partnerships, Ottawa, Ontario

**Fisheries and Oceans Canada:** Burlington, Ontario; Ottawa, Ontario; and Winnipeg, Manitoba

Foreign Affairs and International Trade, Ottawa, Ontario: International Development Research Centre, Ottawa, Ontario

Girl Guides of Canada, Ottawa, Ontario Government of Canada's Millennium Partnership Program, Ottawa, Ontario Government of Nunavut: Community

Government of Mulayut. Community
Initiatives Program, Department of Sustainable
Development; Department of Culture,
Language, Elders and Youth

**Government of Yukon**, Whitehorse, Yukon Territory, Heritage Branch

**Human Resources Development Canada**, Community Learning Initiatives, Office of Learning Technologies, Ottawa, Ontario

Industry Canada, Ottawa, Ontario Insectarium, Montreal, Quebec

Rednath Museum

Institut de l'énergie et de l'environnement, Quebec, Quebec

IUCN Canada Office, Montreal, Quebec Laurentian University, Sudbury, Ontario: Department of Geology; Department of Biology McGill University, Montreal, Quebec: Lyman Entomological Museum - Ste-Anne-de-Bellevue;

Memorial University of Newfoundland, St. John's, Newfoundland, Department of Biology

**Ministère de l'Agriculture**, Pêcheries et Alimentation du Quebec, Cap-aux-Meules, Quebec

Natural Resources Canada, Ottawa, Ontario: Geological Survey of Canada, Dartmouth, Nova Scotia and Ottawa, Ontario; Terrain Sciences Division; Polar Continental Shelf Project, Ottawa, Ontario Nova Scotia Museum of Natural History, Halifax, Nova Scotia

#### Ontario Federation of Agriculture

Parks Canada, Hull, Quebec: Aulavik National Park; Sachs Habour, Banks Island, Northwest Territories; Haidai Gwaii, Queen Charlotte City, British Columbia

Passionate Vision, Toronto, Ontario

**PEARL**, Queen's University, Kingston, Ontario, Department of Biology

Plastichange International Inc., Drummondville, Quebec

Royal Botanical Gardens, Burlington, Ontario Royal British Columbia Museum, Victoria, British Columbia

**Royal Ontario Museum**, Toronto, Ontario: Centre for Biodiversity and Conservation Biology

**Royal Saskatchewan Museum**, Regina, Saskatchewan: Eastend Fossil Research Station, Regina, Saskatchewan

**Royal Tyrell Museum of Palaeontology**, Drumheller, Alberta

Scouts Canada, Ottawa, Ontario

**Simon Fraser University**, Burnaby, British Columbia: Department of Biological Sciences; Department of Earth Sciences

Société de la faune et des parcs du Quebec, Quebec City, Quebec

Teck Corporation, Vancouver, British Columbia

**Treasury Board of Canada Secretariat**, Ottawa, Ontario: Youth Internship Program

**Tourism Yukon**, Whitehorse, Yukon Territory, Heritage Branch

Université Laval, Quebec City, Quebec: Centre d'études nordiques; Département de biologie Université de Montreal, Montreal, Quebec,

département d'anthropologie

Université du Quebec à Hull, Hull, Quebec

Université du Quebec à Montreal, Montreal, Quebec, Biology department

**Université du Quebec à Rimouski**, Rimouski, Quebec, Institut des sciences de la mer

## Showcasing Australia's Art of Nature

In celebration of Australia's Centenary of Federation, CMN presented *Seasons of the South*, an exhibition featuring the works of Antarctic photographers and Aboriginal artists. On display between January and March of 2001, the exhibition was presented in partnership with the Australian High Commission and showcased some of the varied contributions Australians have made to the art of nature. "That Sweep of Savage Splendour," just one element of the three-part exhibition, included a rare selection of photographs taken by the legendary polar photographer Frank Hurley, who recorded some of the famous Antarctic expeditions in the early 1900s.



Commissioner, H.E. Greg
Wood, at Seasons of the
South exhibition opening

**University of Alberta**, Edmonton, Alberta: Department of Biological Sciences; Department of Anthropology

University of British Columbia, Vancouver, British Columbia: Department of Earth & Ocean Sciences; Department of Zoology

**University of Calgary**, Calgary, Alberta: Department of Biological Sciences; Department of Geology and Geophysics

**University of Guelph**, Guelph, Ontario, Department of Environmental Biology

**University of Manitoba**, Winnipeg, Manitoba: Department of Entomology; Department of Geological Sciences

University of New Brunswick, Moncton, New Brunswick, Department of Anthropology University of Prince Edward Island, Charlottetown, Prince Edward Island,

Department of Biology

University of Saskatchewan, Saskatoon,
Saskatchewan: Department of Geography;

Department of Geological Sciences

University of Toronto, Toronto, Ontario:
Department of Anthropology; Department of Geology

**University of Victoria**, Victoria, British Columbia: Department of Anthropology; Department of Biology

**University of Windsor**, Windsor, Ontario, Department of Biology

**Urgel Delisle & Associés**, St-Jean-sur-Richelieu, Quebec

Wildlife Habitat Canada, Ottawa, Ontario

#### REGIONAL

Action Sandy Hill, Ottawa, Ontario Adopt a Riverbank Project

**Algonquin College**, Ottawa, Ontario: Applied Museum Studies

Backyard Sanctuary Concept, Navan, Ontario Big Rideau Lake Association

Bousfield, E.L., Ottawa, Ontario

Brookfield High School, Ottawa, Ontario

Canada Trust Friends of the Environment Foundation, Toronto, Ontario

Carleton University, Ottawa, Ontario: Department of Earth Sciences; Department of Geography; Students Association

City of Gloucester, Ontario City of Nepean, Ontario

City of Ottawa, Ottawa, Ontario

Conseil du loisir scientifique de l'Outaouais, Hull, Quebec

Dows Lake Marina, Ottawa, Ontario Earth Day Ottawa-Carleton, Ottawa, Ontario Eastern Ontario Biodiversity Museum, Kemptville, Ontario

École secondaire Grande-Rivière, Aylmer, Quebec Écomusée de Hull, Hull, Quebec Environment Committee of Ottawa South

(ECOS), Ottawa, Ontario Friends of the Jock River, Stittsville, Ontario Friends of the Rideau, Smiths Falls, Ontario

Geldart, Peter Grenville Stewardship Council

**Ikebana International**, Ottawa Centennial Chapter 120, Ottawa, Ontario

Kemptville Rotary Club, Kemptville, Ontario Learning for a Sustainable Future, Ottawa, Ontario

Lee R F

Leeds County Stewardship Council Lisgar Collegiate Institute, Ottawa, Ontario

Long Island Marine Inc.

M.O.M. Printing, Ottawa, Ontario Manotick Kiwanis Club, Manotick, Ontario Merrickville-Wolford Environmental Advisory Committee Mississippi Valley Conservation Authority,

Mountain Equipment CO-OP, Ottawa, Ontario Muskies Canada

Ontario Ministry of Natural Resources:

Landowner Resource Centre-Manotick; Peterborough, Ontario

Ontario Ministry of the Environment
Ontario Soil and Crop Improvement

Association (Environmental Farm Plans)
Ottawa Field-Naturalists' Club, Ottawa, Ontario

Ottawa Folklore Centre, Ottawa, Ontario

Ottawa-Carleton Greenprint

Rainbird, Rob

Region of Ottawa-Carleton, Ottawa, Ontario

Renegade Bass Tournament Association of Eastern Ontario

Rideau Canal Museum

Rideau Canoe Club, Ottawa, Ontario

**Rideau Environmental Action League**, Smiths Falls, Ontario

Silitiis Palis, Olitario

Rideau Glen Community Association Rideau Valley Conservation Authority, Manotick, Ontario

Rideau Valley Conservation Foundation

Riverside Church, Ottawa, Ontario

Riverside Park Community and Recreation Association, Ottawa, Ontario

Sandy Hill Community Health Centre,

Ottawa, Ontario

Smiths Falls District Collegiate Institute,

Smiths Falls, Ontario

Smiths Falls District Chamber of Commerce, Smiths Falls, Ontario

Sillitis Falls, Olitario

Smiths Falls Water Commission, Smiths Falls, Ontario

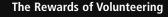
Tait. V.

Tener, J.S., Ottawa, Ontario

Trinity United Church, Smiths Falls, Ontario University of Ottawa, Ottawa, Ontario:

Biology Department; Department of Chemistry; Environmental Association; Faculty of Education; Geography Department; Geology Department

Ville d'Aylmer, Aylmer, Quebec Wetlands International



Daspletosaurus torosus to enthusiastic Museum visitors.

For nearly 20 years, Lynne Kaplansky has made a weekly trip to the Canadian Museum of Nature, spreading her love of nature to thousands of school children. A biologist by training, she has undertaken various other scientific endeavours, but nothing equals her interest in helping kids discover and appreciate the animals and birds that populate this country. Lynne has committed countless hours as a school programming volunteer, demonstrating her life-long passion for teaching. When she speaks of rewards, her emphasis is on the gift she receives by communicating her understanding and respect for nature to children and on the pleasure of sharing what she knows.



# Volunteers

2001 is the Year of the Volunteer and the Museum is happy to celebrate the valued contributions these individuals make to the organization. This year 233 members of the community contributed their time and enthusiasm to support CMN programming, chiefly in Collections, Research and Community Services. The 10,799 hours they volunteered in total have an estimated economic value of \$178,000.

Victor Adomaitis Clémence Ahounou Veronica Allenger Melba Angell Caroline Archambault Violaine Archambault Catriona Armstrong Vanessa Arnold Cheyenne Arrowsmith Lorne Atchison Armeen Azher Fatima Baalbaki Celina Bak Niki Beamish David Beck Nancy Binnie Elizabeth Boileau Mederic Borgeaud Catherine Borza Giselle Bouchard Irène Boucher Brigitte Boudreau Michael Bousada Pat Bowen Colin Bowen Michelle Braun Laura Bridgeman Carole Brown Sara Bryan Claudia Burns William Burr Daniel Bush Louise Campagna Jeff Campagnola Phil Campbell Lynn Capuano Isabelle Carigman-Chagnon Yuen-Ying Carpenter Mélissa Carpentier Megan Cayer Daniel Cayley-Daoust Glenn Charron Harold Chase Amandine Chen Ricky Choquette Alexandra Chowaniec Noreen Christie Marianne Clarke

Ersen Cogulu Adam Cooke Amanda Currie Vanessa Currie Angèle Cyr Amèlie Dallaire Betty Dawson Yuan Deng Gretchen Denton Naomi DeSilva Mireille Deussing Wendy Dion Van LeDo Theodora Dragomirescu Elyse Drouin Alexi Dumouchel Ricou Heather Duthie Frank Dyson Amal El-Mohtar Phyllis Esdon Jimena Eyzaguirre Anne-Marie Finlay Pam Fitzgerald Erin Fletcher Alexandra Fortier Laura Fullarton Alex Fulton Lydia Gareau Alain Gauthier Nicholas Gauthier **Huguette Gavrel** Carol German Marilyn Gilbert Mélinda-Ashley Gilhen Melinda Glockling Mireille Godbout Robin Gold Eric Gosselin Virginia Grant Jennifer Griffiths Daniel Hall lack Hall

Adeline Hardie

Gail Harington

Kyle Hayward

Mimi Hoang

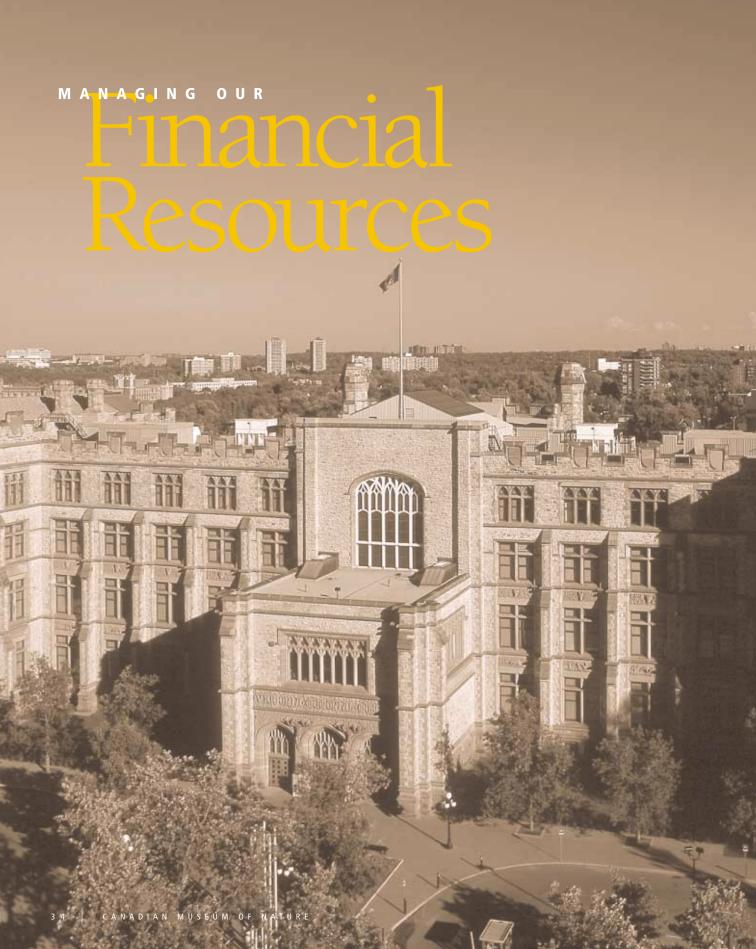
Lynda Holleman

Innogen Henderson

Peggy Holton Jennifer Horne-McKaig Priscilla Hu John Hunt Betty Anne Hurst Katie Jarrett Safa Jinje Krista Johns Tiffany Jubb Sol Kaiman Lynn Kaplansky Stratis Karovionnis Carmel Kasper Vivien Kemeny Senan Kiryakos Nathan Klein Pauline Klosevych Claudette Laberger Stéphanie Lalonde Simonne Larouche Andréanne Lavergne-Fournier Judy Leeson Marc-Antoine Legault Diane Lemieux Hélène Lepage Isabelle Lesage Barbara Liddy Monika Lieberenz Alison Lin Kathleen Liver Andrew Logan Nancy Luc Nicole Lupien Yao Ma Keran Ma Lori Macadam Mollie MacCormac Kate Maclean Olivier Marceau-Robillard Ilana Marcovitch **Chantal Martin** Pat Martin Philip Martin Irene Mayer Julien Maynard Laurence-Olivier Maynard Stéphanie McConnell-Enright Alan McDonald

Mana McDonald George McIlhinney Elizabeth McMillan Jean-Michel Melanson-Drapeau Vivian Menzies Jane Merlin Sandra Millar **Huguette Miron** Alexiane Montpetit-Meilleur **Daniel Mooney** David Moore Flie Moussalli Isabel Muir Lillian Munro Terry Murdie Judith Murillo Tammy Murray Valérie Ménard Arlene Neilson In-Leng Ng Cathie Norton Michelle Nugent Brita Isabel Oeding Saood Omer Moaméra Omerovic Michel Paradis Martin Paris Mary Parsons Anisa Patel Dale Patten Jennifer Patterson Jane Pearce Virginia Peck Marie-Louise Poland Nancy Ponce Violeta Ponce Roxanne Pye Bassett Marissa Quigley Clifford Quince Joyce Quince Nicholas Rivard Marie-Josée Rivard Simon Rivet Alex Robertson Anne Robinson Violette Routhier Joan Rowed

Susan Rust Elise Saint-Martin Denise Sarda Adam Saulis Io Saunders Michelle Scheerder Yvonne Seiers Phommachakr Sengmany Anita Shlien Marek Skapski Ayat Soben Khadije Sobh Katherine Steigerwald Nathalie Strub Ada Su Jasmin Sultan Elaine Sung Bayu Sutarjono **David Symons** Mew Symons Mehmet Taner **David Taylor** John Tener Maxime Thomas Robbie Thomas Ted Tozer Marie Tremblay Carole Treverton Laura Trudeau Nadia Trudel Mélanie Villeneuve Maria Vogel Paul Walker Margot Watt Joan White **Eric Wong** Jean Woo Roy Wood Elizabeth Woodbury Shirley Xing Erin Zeleny Yong-li Zhang



# <sup>F</sup>'Analysis

The following provides an analysis of the 2001 financial results of the Museum in comparison to 2000.

#### **Comparison of Financial Results**

(in thousands of dollars)

	2001	% Increase (Decrease)	2000	% Increase (Decrease)*
Revenue				
Parliamentary appropriation	22,874	5 %	21,772	5 %
Amortization of deferred capital funding	489	(17)%	588	10 %
Generated revenue	2,359	27 %	1,863	13 %
Total revenue	25,722	6 %	24,223	6 %
Expenses				
Personnel costs	10,382	10 %	9,411	7 %
Severance costs	171	(8)%	186	88 %
Interest on capital lease obligation	3,369	(1)%	3,398	(1)%
Depreciation of capital assets	1,489	(6)%	1,590	(3)%
Operating expenses	10,409	17 %	8,893	(3)%
Total operating expenses	25,820	10 %	23,478	1 %
(D.f.:)	(00)	(442)0/	745	OF 0/
(Deficiency) excess of revenue over expenses	(98)	(113)%	745	85 %
Equity of Canada, beginning of year	(28)		(773)	
Decrease due to change in accounting policy	(144)	N/A	-	N/A
Equity of Canada, end of year	(270)		(28)	

<sup>\*</sup> Relative to 1999 figures

During fiscal year 2001, the CMN's parliamentary appropriation increased by 5% or \$1.102 million due to the approval of compensation for increased contribution to the Superannuation Pension Plan and compensation for wage increases due to renewed collective agreements.

Generated revenue for fiscal year 2001 are higher than for fiscal year 2000 by \$496 thousand which is mainly due to higher revenue from contributions, educational programmes and interest income.

Personnel costs of approximately \$10.4 million for the year are the single most significant expense of the Corporation, representing approximately 40% of total revenue. Personnel costs have gone up by 10% from 2000 for a variety of reasons including higher number of employees, normal wage increases, a retroactive adjustment to salaries for some groups of employees on renewal of a collective agreement and higher Employer contribution to the Superannuation Pension Plan as a result of legislative change.

The operating expenses for 2001 are higher than for fiscal year 2000 by \$1.516 million as a result of two major items. These items are the development of larger scale exhibits in 2001 compared to the prior year causing higher exhibit expenses of \$717 thousand and higher property taxes payable in 2001 compared to 2000. As a result of the revenue and expenses mentioned above, the CMN reports a deficiency of revenue over expenses of \$98 thousand for fiscal year 2001.

Effective April 1, 2000 the obligation for employee severance benefits is accrued for all employees whether or not the employees are eligible to the severance benefit plan. This change in accounting policy has been applied retroactively without restatement of comparative figures.

The effect of this change was an increase of \$125,000 to the current year's severance benefit provision and a decrease to opening Equity of Canada of \$144,000.

The Museum anticipates consecutive years of deficiencies of revenue over expenses because of depreciation charges (\$992 thousand in 2001) for its facility in Aylmer, Quebec, which is shown on the Museum's balance sheet as a capital lease. Prior to acquiring this building in 1997, the Museum only leased facilities, and therefore did not report on its Statement of Operations depreciation charges relating to a building. These lease dollars were converted in 1997 to payments on the capital lease for the facility thus creating an imbalance on the Statement of Operations. This accounting treatment will keep the Corporation's Equity in a deficit position for many years. The situation will begin to reverse near the mid-point of the lease term and completely rectify itself over the full term of the lease. This does not impact the Corporation's cash flow or financial stability in any way.

The Museum faces a major challenge with the high cost of carrying and operating its two facilities. To relieve this situation, the Museum is exploring the idea of PWGSC purchasing the Natural Heritage Building (i.e. paying out the capital lease) to reduce the carrying costs for the Museum. The impact of such a transaction would be the removal of depreciation charges of \$992 thousand and the reduction of the interest expense of approximately \$3.4 million annually from the Museum's financial statements, thereby improving the Museum's equity position. The financial statements would have a more positive impact in negotiations with potential sponsors.

# Statements

# MANAGEMENT'S RESPONSIBILITY OF FINANCIAL REPORTING

Management is responsible for establishing and maintaining a system of books, records, internal controls and management practices to provide reasonable assurance that: reliable financial information is produced; the assets of the Corporation are safeguarded and controlled; the transactions of the Corporation are in accordance with the relevant legislation, regulations and by-laws of the Corporation; the resources of the Corporation are managed efficiently and economically; and the operations of the Corporation are carried out effectively.

Management is also responsible for the integrity and objectivity of the financial statements of the Corporation. The accompanying financial statements were prepared in accordance with Canadian generally accepted accounting principles. The financial information contained elsewhere in this annual report is consistent with that in the financial statements.

The Board of Trustees is responsible for ensuring that management fulfils its responsibilities for financial reporting and internal control. The Board exercises its responsibilities through the Audit and Finance Committee, which includes a majority of members who are not officers of the Corporation. The Committee meets from time to time with management, the Corporation's internal auditors and the Auditor General of Canada to review the manner in which these groups are performing their responsibilities, and to discuss auditing, internal controls, and other relevant financial matters. The Board of Trustees has reviewed the financial statements with the Auditor General of Canada and has approved them.

The financial statements have been audited by the Auditor General of Canada. Her report offers an independent opinion on the financial statements to the Minister of Canadian Heritage.

#### AUDITOR'S REPORT

#### To the Minister of Canadian Heritage

I have audited the balance sheet of the Canadian Museum of Nature as at March 31, 2001 and the statements of operations, equity of Canada and cash flows for the year then ended. These financial statements are the responsibility of the Corporation's management. My responsibility is to express an opinion on these financial statements based on my audit.

I conducted my audit in accordance with Canadian generally accepted auditing standards. Those standards require that I plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In my opinion, these financial statements present fairly, in all material respects, the financial position of the Corporation as at March 31, 2001 and the results of its operations and its cash flows for the year then ended in accordance with Canadian generally accepted accounting principles. As required by the *Financial Administration Act*, I report that, in my opinion, these principles have been applied, except for the change in the method of accounting for employee future benefits as explained in note 3 to the financial statements, on a basis consistent with that of the preceding year.

Further, in my opinion, the transactions of the Corporation that have come to my notice during my audit of the financial statements have, in all significant respects, been in accordance with Part X of the Financial Administration Act and regulations, the Museums Act and the by-laws of the Corporation.

Joanne DiCosimo

President and Chief Executive Officer

Colin C Fades

Vice-President, Corporate Services and Chief Operating Officer

June 1, 2001

Richard Flageole, FCA

Assistant Auditor General for the Auditor General of Canada

Ottawa, Canada June 1, 2001

# **Balance Sheet as at March 31, 2001**

(in thousands of dollars)

(in thousands of donars)	Notes	2001	2000
Assets Current			
Cash and short-term investments	4	5,005	4,770
Accounts receivable			
Trade		220	401
Government departments and agencies		2,166	919
Inventory		-	14
Prepaid expenses		960	975
		8,351	7,079
Restricted cash, short-term investments and receivables	4, 5	918	629
Collections	6	1	1
Capital assets	7	35,334	35,813
- Copper and a second s		44,604	43,522
Liabilities Current			
Accounts payable and accrued liabilities			
Trade		2,295	2,080
Government departments and agencies		607	676
Current portion - obligation under capital lease	8	179	163
Current portion - loan from Department of Canadian Heritage	8	362	347
Deferred revenue and parliamentary appropriation		1,226	427
Provision for severance benefits		149	131
		4,818	3,824
Obligation under capital lease	8	33,341	33,520
Loan from Department of Canadian Heritage	8	377	738
Deferred capital funding	9	4,417	3,947
Provision for severance benefits		1,125	892
Deferred contributions	10	516	379
District Continuations		44,594	43,300
Endowment	11	280	250
Equity of Canada		(270)	(28)
		44,604	43,522

The notes form an integral part of the financial statements

Approved by the Board of Trustees:

Frank Ling

Chairman of the Board of Trustees

. Kumala Idma Man

R. Kenneth Armstrong

Chairman of the Audit and Finance Committee

**Recommended by Management:** 

Colin C. Eades

Vice President, Corporate Services and Chief Operating Officer

Lynne Ladouceur, CA

Senior Full Time Financial Officer

# Statement of Operations for the year ended March 31, 2001

(in thousands of dollars)

·	Notes	2001	2000
Revenue			
Commercial operations	12	995	990
Contributions		653	292
Educational programmes		202	154
Scientific services		63	58
Interest income		409	344
Other		37	25
		2,359	1,863
Expenses		40.202	0.444
Personnel costs		10,382	9,411
Severance costs		171	186
Interest on capital lease obligation		3,369	3,398
Operation and maintenance of buildings		2,840	2,678
Professional and special services		2,076	2,029
Depreciation of capital assets		1,489	1,590
Real property leases and taxes		1,232	800
Exhibits		1,263	546
Information management infrastructure and systems		1,176	1,225
Marketing and communications		733	547
Material and equipment		494	549
Travel		371	331
Repairs and maintenance		66	92
Freight and cartage		119	74
Purchase of objects for collections		7	4
Other		32	18
		25,820	23,478
Net result of operations before government funding		(23,461)	(21,615)
Parliamentary appropriation for operating expenditures	13	22,874	21,772
Amortization of deferred capital funding	9	489	588
Net result of operations	14	(98)	745

The notes form an integral part of the financial statements.

# Equity of Canada for the year ended March 31, 2001

(in thousands of dollars)

Notes	2001	2000
Equity of Canada, beginning of year	(28)	(773)
Decrease due to change in accounting policy 3	(144)	
Balance, beginning of year as restated	(172)	(773)
Net result of operations	(98)	745
Equity of Canada, end of year	(270)	(28)

The notes form an integral part of the financial statements.

# Statement of Cash Flows for the year ended March 31, 2001

(in thousands of dollars)

	2001	2000
Operating activities Net result of operations	(98)	745
Items not involving cash:		
Depreciation of capital assets	1,489	1,590
Employee severance benefits	251	155
Amortization of deferred capital funding	(489)	(588)
Decrease due to change in accounting policy	(144)	_
Increase (decrease) in deferred contributions	137	(8)
Net change in non-cash working capital	(92)	(538)
	1,054	1,356
Financing activities Repayment of loan from the Department of Canadian Heritage	(346)	(333)
Appropriation used to purchase depreciable capital assets	959	364
Obligation under capital lease	(163)	(147)
Endowment increase	30	-
	480	(116)
Investing activities		
Acquisition of capital assets	(1,010)	(174)
(Increase) decrease in restricted cash and short-term investments	(289)	8
	(1,299)	(166)
Increase in cash and short-term investments	235	1,074
Cash and short-term investments, beginning of year	4,770	3,696
Cash and short-term investments, end of year	5,005	4,770

The notes form an integral part of the financial statements.

## Notes to Financial Statements for the year ended March 31, 2001

#### 1. Authority and Mission

The Canadian Museum of Nature was established by the Museums Act on July 1st, 1990, and is an agent Crown corporation named in Part I of Schedule III to the Financial Administration Act.

The Corporation's mission is to increase, throughout Canada and internationally, interest in, knowledge of and appreciation and respect for the natural world by establishing, maintaining and developing for research and posterity a collection of natural history objects, with special but not exclusive reference to Canada, and by demonstrating the natural world, the knowledge derived from it and the understanding it represents.

#### 2. Significant Accounting Policies

These financial statements are prepared in accordance with generally accepted accounting principles and reflect the following policies.

#### A) Inventory

Inventory of publications is valued at the lower of cost and net realizable value.

#### B) Capital Assets

Capital assets are recorded at cost. Assets recorded as capital leases are initially recorded at the present value of the minimum lease payments at the inception of the lease. Depreciation is calculated on the straight-line method using rates based on the estimated useful life of the assets as follows:

Property under capital lease	35 years
Collection cabinets and compactors	35 years
Research equipment	10 years
Technical equipment	10 years
Furnishings and office equipment	10 years
Motor vehicles	5 years
Computer equipment and software	3 years

Major leasehold improvements are capitalized and depreciated over the term of the respective leases to a maximum period of five years.

Renovation work in progress is capitalized and will be depreciated as phases are completed.

Material and equipment acquired for the purpose of the design, development and maintenance of exhibits are charged to operations in the year of acquisition.

#### C) Collections

The Canadian Museum of Nature holds and preserves invaluable collections of natural history specimens for the benefit of Canadians, present and future. The collections form the largest part of the assets of the Corporation. The collections are shown as an asset on the balance sheet at a nominal value of \$1,000 due to practical difficulties in determining a meaningful value for these assets. Objects purchased for the collections are recorded as an expense in the year of acquisition. Objects donated to the Corporation are not recorded in the books of accounts.

#### D) Pension Plan

The Corporation's employees participate in the Public Service Superannuation Plan administered by the Government of Canada. The Corporation's contributions to the Plan are 2.14 times the employees' contributions. These contributions represent the total pension obligations of the Corporation and are recognized in the accounts on a current basis.

The Corporation is not required to make contributions with respect to actuarial deficiencies of the Public Service Superannuation Account.

#### E) Employee Severance Benefits

The corporation is required to recognize certain non-pension post-employment benefits over the periods which employees render services to the Corporation. Employees are entitled to specified benefits on termination as provided for under conditions of employment, through a severance benefit plan. The Corporation recognizes the cost of future severance benefits over the periods in which the employees render services to the entity and the liability for these benefits is recorded in the accounts as the benefits accrue to employees.

#### F) Parliamentary Appropriation

The parliamentary appropriation for operating expenditures is recognized as revenue in the fiscal year for which it is approved. The portion of the parliamentary appropriation used to purchase depreciable capital assets is recorded as deferred capital funding and amortized on the same basis and over the same period as the related capital assets. Parliamentary appropriations for specific projects are deferred and recognized on the Statement of Operations in the year in which the related expenses are incurred.

#### G) Contributions

The Corporation follows the deferral method of accounting for contributions

Unrestricted contributions are recognized as revenue when received or receivable if the amount to be received can be reasonably estimated and collection is reasonably assured. Contributions externally restricted are deferred and recognized as revenue in the year in which the related expenses are recognized. Restricted investment income is recognized as revenue in the year in which the related expenses are incurred.

Contributions received in a form other than cash are recorded at their fair value at the date they are received by the Corporation.

Volunteers contribute a significant number of hours per year. Because of the difficulty of determining their fair value, contributed services are not recognized in these financial statements.

#### 3. Change in Accounting Policy

Effective April 1, 2000 the Corporation adopted the new accounting recommendations of the Canadian Institute of Chartered Accountants with respect to employee severance benefits. Under the new recommendations, obligations for employee severance benefits are accrued for all employees whether or not they are eligible to the severance benefit plan and the expense is recognized as employees render the services necessary to earn these employee severance benefits. Prior to the adoption of the new standard, the cost of employee severance benefits was recorded only when employees became eligible to the severance benefit plan as provided for under the conditions of employment.

This change in accounting policy has been applied retroactively without restatement of prior year comparative figures. The effect of the change in policy was an increase of \$125,000 in the current year for severance benefit provision and a decrease to opening Equity of Canada of \$144,000.

#### 4. Cash and Short-term Investments

The Corporation invests operating and restricted funds in the short-term money market. The overall portfolio yield as at March 31, 2001 was 4.93% (2000 – 5.11%). Treasury policies for the Corporation limit investments to instruments held in short-term investments to a maximum of 36 months rated AA or better and guaranteed by the Government of Canada, a provincial government or the Royal Bank of Canada. The average term to maturity is  $17\ days$  (2000 –  $15\ days$ ). The cost of the portfolio approximates its fair value.

# 5. Restricted Cash, Short-term Investments and Receivables

Restricted cash, short-term investments and receivables include deferred contributions, funds received for the Endowment and amounts receivable that can be reasonably estimated and for which collection is reasonably assured. Restricted cash accounts are managed in accordance with the donor's wishes and are invested in accordance with investment policies of the Corporation.

#### 6. Collections

The Canadian Museum of Nature holds and preserves invaluable collections of natural history specimens for the benefit of Canadians, present and future. The natural history collections consist of over 10

million specimens and grew by 46,720 items this fiscal year. They are an exceptional scientific resource that is available nationally and internationally for research, exhibits and education.

The collections are divided into four discipline related groups, being:

- the Earth Sciences collection (minerals, rocks, gems, fossils)
- the Vertebrates collection (mammals, birds, fish, amphibians, reptiles)
- the Invertebrates collection (molluscs, insects, crustaceans, parasites, worms)
- the Botany collection (algae, vascular plants, mosses, lichens)
  In addition, conservation research is conducted to improve the management of the collections.

#### 7. Capital Assets

(in thousands of dollars)	Cost	Accumulated depreciation	2001 Net book value	2000 Net book value
Land	555	_	555	505
Property under capital lease	35,040	4,958	30,082	31,074
Collection cabinets and compactors	3,529	503	3,026	3,119
Computer equipment and software	3,036	2,966	70	124
Research equipment	1,466	1,313	153	115
Furnishings and office equipment	1,312	820	492	564
Leasehold improvements	1,997	1,854	143	210
Technical equipment	312	245	67	80
Motor vehicles	58	36	22	22
Renovation work in progress	724	_	724	_
	48,029	12,695	35,334	35,813

The Victoria Memorial Museum Building and grounds are owned by the Government of Canada and consequently are not included in capital assets.

#### 8. Capital Lease and Secondary Financing Obligations

The Natural Heritage Building (NHB) houses the Canadian Museum of Nature natural history collections and administrative functions, on the Corporation's site in Aylmer, Quebec.

The Corporation is acquiring the building through a lease purchase agreement with a term of 35 years. It is committed to pay rent under all circumstances and in the event of termination of the lease, at the Corporation's option or otherwise, pay sufficient rent to repay all financing on the building. Management intends to completely discharge its obligation under the lease and obtain free title to the building in 2031. In 1997-98, the Corporation secured financing for the additional construction and fit-up costs of the NHB with the Department of Canadian Heritage.

Future minimum lease and debt repayments, by year and in aggregate, under the financing obligations are as follows:

#### (in thousands of dollars)

	Obligation under capital lease	Obligation under loan from Department of Canadian Heritage	Total financing obligations
2002	3,500	377	3,877
2003	3,500	377	3,877
2004	3,500	-	3,500
2005	3,500	-	3,500
2006	3,500	-	3,500
Thereafter	89,250	-	89,250
Total minimum future payments	106,750 (1)	754 (2)	107,504
Deduct: Imputed interest	(73,230)	(15)	(73,245)
Present value of financing obli	gations 33,520	739	34,259

- (1) The amounts payable under the capital lease are based on the fixed interest rate of 9.88%, for a period of 35 years, established at the time of signing the lease.
- (2) The amounts payable under the loan from the Department of Canadian Heritage are based on the fixed interest rate of 4.27%, for a period of 5 years.

#### 9. Deferred Capital Funding

Deferred capital funding represents the unamortized portion of parliamentary appropriation used to purchase depreciable capital assets. Changes in the deferred capital funding balance are as follows:

#### (in thousands of dollars)

	2001	2000
Beginning balance	3,947	4,171
Add appropriation used to purchase depreciable capital assets	959	364
Less amortization of deferred capital funding	(489)	(588)
Ending balance	4,417	3,947

#### 10. Deferred Contributions

Deferred contributions represent unrecognized externally restricted donations and investment income. The changes in the deferred contribution balance and the components of this balance are as follows:

#### (in thousands of dollars)

	2001	2000
Beginning balance	379	387
Add contributions received during the year	654	232
Less amounts recognized in the year	(517)	(240)
Ending balance	516	379
Deferred contributions are comprised of:		
Deferred contributions are comprised of: Funds restricted for research purposes	72	65
· ·	72 427	65 283
Funds restricted for research purposes		

#### 11. Endowment

The Corporation maintains an endowment in the principal amount of \$280,000 (\$250,000 at March 31, 2000) received from Anne and Henry Howden, which included a significant entomological collection. The endowment was established to enable professional studies and research of entomological collections for the Museum.

The principal of the Systematic Entomology Endowment Fund can not be expended. Accumulated interest earned from the endowment must be expended for specified purposes and the residual balance totalled \$16,750 at March 31, 2001 (\$31,070 at March 31, 2000) which is included in deferred contributions (Note 10).

In the event that the Corporation decides not to maintain entomological collections, the Systematic Entomology Endowment Fund shall be transferred, along with any entomological collections, to the Royal Ontario Museum.

#### **12. Commercial Operations**

Commercial operations revenue is comprised as follows:

#### (in thousands of dollars)

	2001	2000
Boutique lease	55	52
Publishing revenues	24	37
Publishing royalties	3	33
Admission fees	485	449
Parking	182	171
Rental of facilities	246	248
Total commercial operations revenue	995	990

#### 13. Parliamentary Appropriation

(in thousands of dollars)

	2001	2000
Appropriation approved	24,184	21,658
Applied as follows:		
Parliamentary appropriation for operating expenditures recognized on the Statement of Operations	22,874	21,772
Add appropriation used to purchase capital assets	959	364
Less payment to the Department of Canadian Heritage	(377)	(377)
Increase (decrease) in deferred parliamentary appropriation	728	(101)
Total applied	24,184	21,658

#### 14. Net Result of Operations on a Cash Basis

(in thousands of dollars)

	2001	2000
Net result of operations:	(98)	745
Items not involving cash:		
Depreciation of capital assets	1,489	1,590
Employee severance benefits	251	155
Amortization of deferred capital funding	(489)	(588)
Decrease due to change in accounting policy	(144)	_
Net result of operations after adding items not involving cash	1,009	1,902

#### **15. Related Party Transactions**

In addition to those related party transactions disclosed elsewhere in these financial statements, the Corporation is related in terms of common ownership to all Government of Canada created departments, agencies and Crown corporations. The Corporation enters into transactions with these entities in the normal course of business.

#### **16. Contractual Commitments**

The Corporation has entered into agreements for the provision of services and equipment. The payments under these agreements are approximately as follows:

(in thousands of dollars)		2003 and subsequent
	2002	years
Facilities maintenance costs	1,923	_
Systems and infrastructure agreements	1,521	2,190
Other commitments	468	28
	3,912	2,218

#### 17. Pay Equity

In 1994, a pay equity complaint was filed by the Public Service Alliance of Canada (PSAC) against the Corporation alleging discrimination in wages based on gender inequity. The PSAC and the Corporation have agreed to develop and implement a Job Classification and Evaluation Plan. This Plan will be used to determine relativity between jobs and will ensure that there is no gender based wage discrimination within jobs at the Corporation. The Corporation cannot determine and assess the outcome of this complaint on its operations. The effect, if any, of the ultimate resolution of this matter will be accounted for in the year when known.

#### 18. Contingency

During 1999, a sub-contractor of the Corporation received a claim for additional costs regarding the Stonework project at the Victoria Memorial Museum Building. The sub-contractor is now reviewing the claim for its legitimacy. The Corporation cannot determine and assess the outcome of this claim on its operations. The effect, if any, of the ultimate resolution of this matter will be accounted for in the year when known.

#### **19. Comparative Figures**

The 2000 comparative figures have been reclassified to conform to the 2001 financial statement presentation.



#### **Canadian Museum of Nature**

www.nature.ca

## Victoria Memorial Museum Building

240 McLeod Street Ottawa, Ontario

## **Natural Heritage Building**

1740 Pink Road Aylmer, Quebec

#### Information:

(613) 566-4700 or 1-800-263-4433

# Published by Communication Services:

(613) 566-4249

## The Annual Report Team:

Elizabeth McCrea Lucille Fournier Colin Eades Lynne Ladouceur

#### **Copy Writing:**

Carolyn Masleck Insight Communications

## Translation:

ComTra Inc.

# **Design and Production:**

**Insight Communications** 

## **Printing:**

The Lowe-Martin Group

A version of this report is available on the Canadian Museum of Nature Web site at www.nature.ca.