



Office of the Auditor General of Canada Bureau du vérificateur général du Canada



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21 February 2007

To the Board of Trustees of the Canadian Museum of Nature

We have completed the special examination of the Canadian Museum of Nature in accordance with the plan presented to the Audit and Finance Committee of the Board of Trustees on 8 June 2006. We are pleased to provide the Board of Trustees with the final report on our special examination (attached), as required by Section 139 of the *Financial Administration Act* (FAA).

I would like to take this opportunity to express my appreciation to the board members, management, and the Museum's staff for the excellent cooperation and assistance offered to us during the examination.

Yours sincerely,

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Lyse Ricard, FCA Assistant Auditor General

Attach.

Table of Contents

Special Examination Opinion	
Summary of the Report	3
Overview of the Canadian Museum of Nature	5
Mandate	5
Organization of the Canadian Museum of Nature	5
Corporate vision	5
Corporate objectives and strategies	6
Museum activities	6
Funding	6
Challenges	7
Findings and Recommendations	8
Research management	8
Collections	10
Public education projects	14
Victoria Memorial Museum Building Renewal Project	17
Environment and sustainable development	21
Information technology	24
Human resources	27
Strategic planning	29
Performance measurement and reporting	32
Governance	33
Appendices	
 A. About the Special Examination B. Corporate Objectives and Strategies C. Museums Act, sections 12(1)(a) to (w) 	41 44 46



Canadian Museum of Nature Special Examination Report—2007

To: The Board of Trustees of the Canadian Museum of Nature

Special Examination Opinion

1. Under Part X of the *Financial Administration Act* (FAA), the Canadian Museum of Nature is required to maintain financial and management control and information systems and management practices that provide reasonable assurance that its assets are safeguarded and controlled; its financial, human, and physical resources are managed economically and efficiently; and its operations are carried out effectively.

2. The FAA also requires the Museum to have a special examination of these systems and practices carried out at least once every five years.

3. Our responsibility is to express an opinion on whether there is reasonable assurance that, during the period covered by the examination from March 2006 to October 2006, there were no significant deficiencies in the systems and practices we examined.

4. We based our examination plan on a survey of the Museum's systems and practices, which included a risk analysis. We submitted the plan to the Audit and Finance Committee of the Board of Trustees on 8 June 2006. The plan identified the systems and practices that we considered essential to providing the Museum with reasonable assurance that its assets are safeguarded and controlled, its resources managed economically and efficiently, and its operations carried out effectively. Those are the systems and practices that we selected for examination.

5. The plan included the criteria for the special examination that we selected specifically for this examination in consultation with the Museum. The criteria were based on our experience with performance auditing. Our choice of criteria was also influenced by legislative and regulatory requirements, professional literature and standards, and practices followed by the Museum and other organizations. The

systems and practices we examined and the criteria we used are listed in Appendix A of this report.

6. We conducted our examination in accordance with our plan and with the standards for assurance engagements established by The Canadian Institute of Chartered Accountants. Accordingly, it included the tests and other procedures we considered necessary in the circumstances. In carrying out the special examination, we relied on the internal audit of human resources management.

7. In our opinion, based on the criteria established for the examination, there is reasonable assurance that there were no significant deficiencies in the systems and practices we examined.

8. The rest of this report provides an overview of the Museum and more detailed information on our examination findings and recommendations.

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Lyse Ricard, FCA Assistant Auditor General for the Auditor General of Canada Ottawa, Canada October 2006

Summary of the Report

9. As stated in our special examination opinion, we concluded that during the period under examination, the systems and practices of the Canadian Museum of Nature (CMN) were designed and operated in a way that provided reasonable assurance that assets were safeguarded and controlled, resources managed economically and efficiently, and operations carried out effectively.

10. Our 2002 special examination report identified no significant deficiencies. We did, however, suggest improvements on three key themes:

- Strategic direction,
- Evaluation of financial and human resources capabilities and needs, and
- Performance management and accountability.

11. In this special examination, we found that the Museum had made progress in addressing many of the observations we raised in 2002. Later in this report, we comment on the Museum's progress in research management, public education projects, information technology, human resource management practices, and strategic planning. However, we did find that the CMN needs to develop specific collection tools and to complete its study on target audiences and its positioning strategy. Management and the Board of Trustees also need to find a long-term solution to fund the CMN's increased need for operations and maintenance (O and M) and capital projects. The CMN also needs to further develop its corporate risk management framework.

12. There are other opportunities for the Museum to enhance the quality of its systems and practices. In our view, the CMN should focus on the following:

- continue to focus research resources on areas where it will have the most impact;
- develop a collection development strategy and plan, and more formally monitor its collections and its overall development through periodic reporting;
- improve its environmental management systems and practices, including strengthening its stewardship role;

- integrate and further improve strategic planning systems and practices; and
- implement additional governance systems and improve specific ones to meet current good governance practices.

Overview of the Canadian Museum of Nature

	13 . The Canadian Museum of Nature (CMN) is Canada's national natural history museum. Originating as the Geological Survey of Canada (GSC) in 1842, the <i>Museums Act</i> established the CMN as a Crown corporation on 1 July 1990. The Museum is part of the Canadian Heritage portfolio, reporting to Parliament through the Minister of Canadian Heritage.	
	14. The CMN's operations are based in the Victoria Memorial Museum Building (VMMB), a designated heritage building located in Ottawa, and the Natural Heritage Building (NHB) in Gatineau, Quebec. The NHB is adjacent to 49 hectares of green space. The Museum owns this property, which includes wetlands, meadows, and forests; along with another smaller property, also a wetland, in Osgoode Township, just outside of Ottawa.	
Mandate	15 . The CMN's mandate, as embodied in the <i>Museums Act</i> , 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.	
Organization of the Canadian Museum of Nature	16. The Act establishes a Board of Trustees and a Chair responsible for managing the business, activities, and affairs of the Museum. The Board appoints a President and Chief Executive Officer (CEO) for the Museum for a five-year term, subject to Governor in Council approval.	
	17 . The Museum employs 168 full-time staff for the regular operations of the Museum and 18 employees dedicated to the VMMB renovation project.	
Corporate vision	18 . In 2003, the CMN implemented a new strategic vision for the Museum to guide it in the upcoming years. With the theme "connecting people with nature," the Museum works to help people understand the intersections of human society and nature. The goal is to implement the new vision fully by 2008.	
	Creating something together that none of us can do separately	
	19 . A key component of the new vision is a new national service	

19. A key component of the new vision is a new national service model, undertaken through the Museum's membership in the Alliance

	of Natural History Museums of Canada (ANHMC). The CMN is one of 12 founding members of the ANHMC. Incorporated in February 2004, members created the ANHMC to work together to improve the preservation and understanding of Canada's natural heritage. The ANHMC has a collective responsibility for over 13.7 million natural history specimens representing the flora and fauna and geological record of Canadian and international collections.
Corporate objectives and strategies	20. The CMN has adopted "environmental change" as the overarching issue for its treatment and study of natural history issues. The CMN and the Board of Trustees have identified the objectives and strategies designed to fulfill the Museum's national mandate (see Appendix B).
Museum activities	21 . The <i>Museums Act</i> lists the activities of the Museum (see Appendix C). The CMN undertakes activities in three key areas: research, collections management, and public education projects.
	22 . The Museum has a collection of more than 10.3 million specimens that is divided in four sectors: earth sciences, invertebrates, botany, and vertebrates. These specimens are cared for in specialized storage areas and through conservation processes. The Museum shares information with the public about the collections through public education projects, and the Museum's website. Researchers also publish their work through scholarly and popular publications.
	23. In January 2002, the CMN announced that it would be undertaking a five-year renovation initiative of the VMMB, the primary site for CMN public programming. Renovation of the VMMB was required to maintain the building as an operational museum and safe environment for visitors and staff. The Museum will have new and renovated galleries, exhibitions, education activities, and new technologies. The renovation initiative is in its third year.
	24. The CMN welcomed 211,960 visitors in 2004–05 and 165,554 visitors in 2005–06 (the decrease due to the ongoing renovation at the VMMB). In addition, there were 6,055,000 visits to the Museum's website in 2005–06.
Funding	25. In 2006–07, the CMN will operate within a total budget of about \$29 million. Other sources of revenue are admission fees, commercial activities, and development activities. The Government of Canada has also allocated \$216.6 million to fund the Victoria Memorial Museum Building Renewal Project. The Natural Partnerships Campaign was

established to support the development of exhibition galleries, exhibitions, and other outreach activities. Its goal is to have \$10 million pledged by October 2006 and an additional \$6 million by March 2008 from partners and individual donors. As of October 2006, \$7 million had been reached, of which \$2 million was committed by one corporate donor.

Challenges 26. The CMN has identified financing as a challenge and is projecting a deficit. According to the Museum, fixed costs and salaries normally make up over 90 percent of operating budgets, leaving discretionary funds in the range of \$2 million per year to sustain core research, collections management and acquisitions, public education programming, new gallery and travelling exhibition development, and fundraising activities. In addition, the Museum has identified increasing real property costs for the VMMB and the NHB as a financial pressure.

27. Funds raised from donors and sponsors will provide support to the Museum's Renewal initiative. However competition for corporate and private contributions is strong in the National Capital Region and across the country. Other national museums are pursuing their own major fundraising campaigns.

28. The CMN faces the challenge of appealing to the 16 to 25 year old market. The Museum, realizing that it competes for their time and attention with alternate forms of education and entertainment, recognizes that it needs to find ways to attract this segment of the market to the museum.

Findings and Recommendations

Research management
 29. The Canadian Museum of Nature (CMN) has a program devoted to research activities, with scientists that are well qualified, enthusiastic, and committed to their work. The Museum has 14 scientists on staff with expertise in a wide variety of disciplines reflecting the diverse core areas of the Museum. There are currently no positions for scientists who specialize in significant traditional areas such as ornithology (birds) and mammalogy (mammals). In 2006–07, the research program's total operational budget is \$375,000, of which \$200,000 was available for discretionary research funding. In 2006–07, at least half of the research projects funded received less than \$10,000 in discretionary funding. Resources for research activities have not increased over the past six years and have been eroded by inflationary costs.

30. We expected the CMN to effectively select and manage relevant research to explore, reveal, and interpret the natural world for all audiences. We also expected that research activities would support the development of the national collection and the public education projects.

The Canadian Museum of Nature has made some improvements since 2002

31. In 2002, we noted that it was important for the CMN to position itself in relation to other scientific bodies and concentrate its efforts in areas where it could make a difference, given its resources, expertise, and collections. Criteria to select research projects, therefore, needed to reflect the Museum's strategic priorities.

32. The Museum has made efforts to focus its research activities. In 2006–07, the Museum is conducting research primarily in botany (the study of plants), zoology (the study of animals), paleontology (the study of life in the geological past), and mineralogy (the study of minerals). Research activities contribute to the CMN's strategic vision. We also noted that the research is more focused on issues of interest to Canadians such as climate change and its impact on northern ecology. Despite these efforts, we remain concerned that the Museum's research activities are still not sufficiently targeted, given current resources. Should the Museum not continue to focus its research activities, it could result in research activities that do too little in too many areas.

Good practices are in place for research selection, monitoring, and measurement

33. We found that the CMN has in place a research selection process and a level of review that is appropriate and commensurate with the level of discretionary funding available for research activities. The selection process includes a review of research proposals by a research advisory committee using set criteria, peer review, and guided by a standardized format. In addition, the CMN conducts annual reviews to examine research progress and measures research activity progress, using standard indicators such as the number of peer-reviewed journal articles published.

The Museum makes good use of alternate arrangements to fund research

34. To maximize discretionary research funds and leverage funds, the CMN has established partnership arrangements with a variety of provincial, national, and international organizations. For example, one of CMN's museum scientists is collaborating on a publication that is cataloguing lampreys. This allows a significant advantage in publication costs for the CMN.

35. However, such partnership arrangements come at the risk of possible loss of leadership and mandate drift, as partners can influence the direction of research, especially in cases where they are providing most of the funding. The Museum needs to continue to pursue these arrangements, while ensuring that it remains focused on projects relevant to its mandate and its strategic vision.

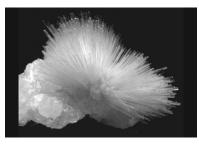
36. The Museum has also actively sought and received significant "in-kind" contributions. It has received a generous endowment from a retired scientist, as well as the ongoing commitment of time, expertise, and scientific collections from emeritus staff.

Research results are used to support Canadian Museum of Nature activities

37. Results of research activities are used to generate knowledge, to guide the development of the Museum's collections, and to create programs for the public. The CMN has a good publication record in peer-reviewed journals. It conducts ongoing research on national collection management and uses museum material for public displays and lectures. Research field programs are used to augment the collection, and research material is loaned to partner organizations.

38. **Conclusion.** The CMN research program has adequate systems and practices to effectively select and manage relevant research projects commensurate with funding and is maximizing its current

Collections



Mesolite from the collection of the CMN, reproduced courtesy of the Canadian Museum of Nature, Ottawa, Canada



Rhodochrosite from the collection of the CMN, reproduced courtesy of the Canadian Museum of Nature, Ottawa, Canada

funding. Processes for project selection and review ensure that the research activity is relevant to Museum needs and strategic vision. However, the scope is still too broad for the existing resource base.

39. Recommendation. The Canadian Museum of Nature should continue to focus existing research resources on specific areas where it can have the most impact. This should include developing planned alternative scenarios in the event that resource levels do not increase.

40. The collection held by the CMN represents the efforts of almost 150 years of collecting. It holds some of the finest natural history collections in Canada—the mineral, rock and gem collections, for example, contain more than 52,000 specimens and have one of the finest Canadian mineral component in the world. The Museum library and archives contain a book collection strong in the fields of the Canadian Arctic, ornithology, systematics, and taxonomy, as well as audio visual material. They also have 4,000 rare books, some dating back to the 1500s, a nature art-collection, and 275,000 photographs. The Museum website provides information of the content of the collection, as well as some digital photographs.

41. We expected the CMN to establish, develop, and maintain a collection of natural history objects reflecting the policy scope of the Museum. We expected the collections to be effectively managed, safeguarded, documented, conserved, and made accessible. We also expected that the CMN would have a long-term capital plan and a maintenance plan in place for the Natural Heritage Building (NHB) and the Victoria Memorial Museum Building (VMMB).

The Canadian Museum of Nature continues to operate without a framework for collection development

42. In our 2002 report, we noted that the committee responsible for drafting a collection development plan had completed a situation analysis but had not decided on a collection development framework. We found that the committee ceased operating in 2002; the Museum has yet to develop a collection development strategy and plan that would serve as a framework for collection management and care and would identify issues, strategies, opportunities, and activities in each collection sector. As mentioned in paragraph 19, the CMN has begun to work in partnership with the Alliance of Natural History Museums of Canada. One of its goals is to combine collections planning and development efforts to facilitate public and scientific access to information in members' collections. While we applaud the Museum

for this initiative, Museum staff continue to work without a proper framework for collection development.

Collections documentation continues to require attention

43. In 2002, we also noted that the Museum had implemented an electronic documentation system for its collections and had a planned conversion rate of 30,000 electronic records per year. However, the Museum documentation plan did not include 491,459 items that had not been analyzed or documented.

44. The Museum has not advanced documentation significantly since 2002 (Exhibit 1).

Collections records	2002	2006
Records available electronically	506,172	579,494
Records not available electronically, but documented on paper	1,751,116	1,841,520
Non-documented collection items	491,459	491,275

Exhibit 1 Status of the documentation process for collections records from 2002 to 2006

45. We would expect the Museum to update its documentation plan that would take into consideration Museum priorities and the 2003 Natural Heritage Building (NHB) Risk Assessment prepared by the Conservation Section (see paragraph 53). We would also expect the Museum to address the backlog over time, as resources become available. This would include developing a strategy to address the non-documented collection items.

Approval process for acquisitions and disposal are in place

46. The Corporate Plan, the Collection Development and Management Policy, and research and exhibition plans guide acquisition and de-accession (disposal) activities. The internal committee that reviewed acquisition requests and recommended acquisitions to the Director of Collections, in place in 2002, has ceased operation. All acquisition requests are now documented and submitted to the Director of Collections for approval following a review to determine the condition of the specimen; review legal and administrative issues; authenticate it; and assess the scientific, historical, or cultural interest of the specimen; and its relative importance to the existing collection. **47**. The Museum also has clearly defined processes and criteria for removing specimens from its collection. All de-accessions are approved by the Board of Trustees with a recommendation from the Director of Collections, and the President and CEO.

No formal process in place to identify gaps in the collection

48. As noted in paragraph 42, the Museum does not yet have in place a documented collection development strategy and plan. We noted in our discussions with a Chief Collection Manager that he could identify the gaps in the collection under his responsibility, but this knowledge is at risk of being lost, should he leave the Museum. We also found that there is no formal tracking and monitoring of collections' development. Currently, the annual growth of the collection is approximately 35,000 specimens. The Museum needs to develop a framework to manage and care for its collection, including identifying and analyzing the gaps to prepare better management information to monitor and report on the collection and its development. In addition, collections managers need to report periodically to senior management and the Board of Trustees on the progress of collection development.

49. **Conclusion.** The Museum has policies and practices in place that guide acquisition and de-accession; however it continues to operate without a collection development strategy and plan. The CMN has in place a computer-based collection management system to manage the specimens and other objects in the collection; however it needs to address its backlog.

50. Recommendation. The Canadian Museum of Nature should develop a collection development strategy and plan to identify its priorities based on its strategic goals, the research plans, and the needs of future exhibitions. The Museum should document its gaps to guide its decisions about acquisitions and resource allocation.

51. Recommendation. The Canadian Museum of Nature should more formally monitor the collections and their overall development through periodic reporting. These reports would allow the Museum to better demonstrate that it is developing the collection in a manner that preserves Canada's natural history.

Conservation of the collections is adequate

52. A 1991 conservation policy guides conservation activities. This policy needs to be updated to ensure that it reflects the risk

management perspective and the current needs of the renovated VMMB and the NHB.

53. In 2002, a risk assessment of the collection material at the VMMB was developed to evaluate the collection care situation to identify preventive conservation concerns and priorities. In 2003, the CMN's NHB collection risk assessment was updated to determine global preventive conservation concerns and care-related collection management priorities. We found no evidence of follow-up of the concerns raised, nor did we find an action plan to develop mitigation strategies to address key risks to the collection.

54. We noted that the Museum had developed and implemented adequate environmental standards in line with the Canadian Conservation Institute to protect the collection at the NHB. Controls are also in place to conserve the collection, such as pest control and controls against ultraviolet rays. The conservation staff provides information and support to collections staff about good practices and materials for preserving specimens. Reports indicate that certain standards are not being met. However, the CMN uses collection storage cabinets to provide environmental stability for specimens and protection from other sources of physical damage, for example, dust, pest, water, or seismic forces.

Security is adequate

55. We found that the CMN has in place a security policy and procedures to ensure proper access to the collection. The Museum's security personnel work closely with other teams to coordinate security effectively. The Museum has defined its security risks and threats and has in place adequate security measures to ensure the protection of its assets, personnel, and visitors. Any incidents are documented, and the Chief of Security ensures actions are taken to address issues as they occur.

56. During the VMMB renewal, the Museum had in place 24-hour security guards to ensure the protection of staff, visitors, and the collection. All planned security systems are not currently in place, although temporary systems have been implemented until final completion of the security system.

Plans are in place for emergency situations

57. The Museum has an up-to-date emergency procedures manual that defines responsibilities and duties in case of emergencies,

evacuation procedures, and actions to be taken in the event of a number of situations, including power failure and hazardous material incidents. At the time of our audit, management had yet to approve the emergency procedures manual. The CMN also has in place a Business Continuity Plan to ensure the protection of valuable assets and continuous functioning of critical services in case of unplanned interruptions at the NHB and the VMMB, especially during the renovations. The Museum also has divisional emergency plans to ensure an orderly and systematic strategy for immediate response and/ or recovery from various crisis scenarios.

Management has long-term plans for building maintenance

The Museum has in place a long-term plan for capital 58. investment for the NHB and operations and maintenance (O and M) for the VMMB and NHB. A VMMB long-term capital plan will be prepared, once renovations are complete and warranty inspection report items have been addressed. The Museum assesses and rates the priority level of its capital and maintenance projects according to welldefined criteria. Current five-year budget projections indicate an average of \$10 million for O and M and \$1.3 million for capital (excludes VMMB and capital lease for the NHB). In December 2006, the federal government announced that the CMN would receive \$2.8 million over the next five years to address health and safety and capital repairs to the NHB. These funds will allow the Museum to address urgent needs. The current five-year budget projections for O and M and capital indicate an annual shortfall of \$2 million the first year, escalating up to \$4.2 million in the fifth year. Due to the funding shortfall, the Museum has had to postpone many planned O and M and capital projects, which will likely result in higher maintenance costs and more costly projects than anticipated. However, postponement of O and M and capital projects can only be a shortterm solution. Management and the Board of Trustees need to find a long-term solution to fund the increased need for O and M and capital projects to continue ensuring the safety of visitors and staff, the protection of its collection, and maintenance of its facilities including the newly renovated VMMB.

59. Conclusion. The Museum has systems and practices in place to ensure that the collection is effectively managed, safeguarded, conserved, and accessible.

Public education projects	60.	Public education projects are composed of exhibitions, public,
	and	educational programs. Exhibitions are one of the fundamental

methods used by the CMN to communicate with the public. The VMMB houses permanent exhibitions and presents temporary exhibitions. In addition, the Museum has travelling exhibitions, as well as virtual exhibitions available on its webpage.

61. The Museum delivers a variety of public programs including films, lectures for adults, and workshops. Educational programs are linked to the Quebec and Ontario curricula. In 2005–06, approximately 17 educational programs were offered.

62. We expected the CMN to effectively develop and maintain public education projects that will be recognized by client groups and peers as a key source of relevant information that furthers knowledge about the natural world, the environment, and humans' place in it.

The Museum has made improvements since 2002

63. In 2002, we found that the Museum needed to adopt a common vision for its public programs, establish priorities, and define criteria to ensure cohesion in developing and planning programs. It also needed to define its positioning strategy based on a market analysis to take into account the needs of its client groups. Furthermore, the Museum needed to develop more formal planning and management tools across all public programs. Finally, the Museum needed to place greater importance on evaluations when developing its public programs.

64. Since then, the Museum has established a program management framework that allows the CMN to look at public education projects in an integrated manner. In 2002, the Program Planning Committee was established to integrate programming activities across all areas of the Museum, including research, collections, and public education. One of its roles is to review new exhibitions and associated public and educational programming. The CMN has also established exhibition guidelines and a strategic market research committee to ensure evaluations are completed for exhibitions and public programs. However, the Museum needs to complete its study on target audiences and its positioning strategy.

Good practices are in place for exhibition planning and management

65. The CMN has developed guidelines and a process document to manage and develop public education projects. In addition, it has put in place committees to select and manage public education projects (see paragraph 64). These enable the Museum to ensure that exhibitions, public programs, and educational programming

complement the Museum mandate and provide guidance for their development and management. However, we noted that the Museum uses a draft process document that has not been formally approved. In addition, there is no formal document to screen and select exhibitions, including documenting selection criteria. The CMN needs to finalize and approve the process and to formalize documentation of exhibition selection.

66. Marketing and communication play a major role in advertising and promoting key exhibitions and programs to the public. Generally, most marketing and communication activities revolve around planned exhibitions; currently these activities have focused around the VMMB renewal project.

67. The CMN's website allows access to virtual exhibitions and to educational and other activities related to the virtual exhibitions. The CMN evaluates the success of virtual exhibitions through user feedback and surveys. We did not, however, find that the process documents for public education projects provide guidance regarding if and when virtual exhibitions should be developed, nor is there in place a corporate-wide process to determine what exhibitions become a virtual exhibition. The Museum may want to consider including guidance regarding virtual exhibitions, given that it is currently developing a web strategy.

The Museum gathers information regarding public interests and needs

68. The CMN gathers information about exhibitions and public programs through evaluations. This information is used to plan future exhibitions and programs. For example, evaluations were completed on the birds and mammals gallery to help inform the development of the renovated galleries in the VMMB. Evaluations on educational programming are also conducted, and feedback sessions with teachers have also been held. The Museum also collects other information through visitor surveys, as well as environmental analysis and market research.

Public education projects contribute to the CMN's national service role

69. As part of the Alliance of Natural History Museums of Canada (ANHMC), the CMN participates in partnership arrangements for exhibitions and public programs. For example, the CMN presented *Fatal Attraction*, an exhibition produced by a European consortium of natural history museums. The exhibition premiered in Canada at the CMN in May 2006 and will travel next to British Columbia and

Quebec. Other joint efforts included a partnership with a federal agency to launch the documentary series Miracle Planet in natural history museums across Canada.

Conclusion. The CMN has adequate systems and practices to 70. effectively maintain public education projects. Guidance for virtual exhibition development, however, is currently not available. The CMN needs to complete its study on target audiences and its positioning strategy.

71. The Victoria Memorial Museum Building (VMMB), the first **Building Renewal Project** "purpose-built" national museum, was designated a Classified Federal Heritage building in 1986 due to its historical and architectural significance, and because it defines the character of the surrounding area. The VMMB also has four National Historic Site designations, and the museum site is also designated under the Ontario Heritage Act by the City of Ottawa.

> Studies for the renewal project began in the late 1980s under 72. Public Works and Government Services Canada (PWGSC). By 2001, the CMN had developed a functional program of renovation requirements. Once approved by the Board of Trustees, this document served as a road map for the renovation and was used to establish the preliminary budget.

On 12 June 2003, the CMN received funding approval of 73. \$168.3 million. On 21 November 2005, an additional \$48.3 million for the project was approved to cover such factors as material and labour cost escalation, unforeseen site and building conditions, and health and safety issues affecting VMMB operations.

74. We expected the CMN to have made reasonable efforts to ensure effective management of renovation of the VMMB, so that renovations are completed on time and according to needs. We also expect the CMN to have adequate processes in place to manage renovation costs. Finally, we expect the Museum to comply with relevant laws, policies, regulations, and best practices regarding protection of heritage sites.

Museum needs were considered

Museum management and the Board decided at an early date 75. that the VMMB needed to remain open throughout any renewal activities to maintain its public profile and audience. Potential problems inherent with this decision could have included an extended

Victoria Memorial Museum

construction period, risk of cost premiums for phasing, significant disruption of museum operations, and issues of quality control. Solutions were found to mitigate these potential problems.

76. The CMN documented its renovation requirements in a functional program. The Museum tracked the design against this program and was guided by it to make decisions. We also found that the Museum sought and considered various options and completed analysis before reaching decisions on the renovation. A number of options were examined for each significant technical option, in terms of its effect on other issues, including heritage issues.

Current project management framework performs adequately

17. From June 2000 to January 2006, CMN contracted with PWGSC to provide project management services and specialized advice and expertise. PWGSC contracted through a public tendering process a construction manager and a prime consultant (a joint venture of three architectural firms). Governance for the renewal project is the responsibility of the CMN Board of Trustees. The Museum's Vice President and Chief Operating Officer serves as the CMN project leader and heads a project renewal and delivery team from the beginning.

78. Challenges arose as a result of aspects of the project management framework under PWGSC. In November 2005, the Treasury Board agreed to a new renovation management framework, effective January 2006. As a result, project management responsibility was transferred from PWGSC to the CMN, with contracting authority for the construction manager and prime consultant also transferred to the CMN. The PWGSC's Centre of Expertise continues to play a role in the project.

79. The CMN now has a project management framework that is performing well and meets the Museum's needs. For example, we found that contractual arrangements and the delegation of authority allows for an effective and timely management and approval processes. A risk management plan is reviewed regularly and adjusted as required. Reporting is streamlined and timely, with the construction manager and prime consultant both reporting directly to the CMN deputy project directors.

Late opening for some galleries despite monitored schedule

80. The CMN's first renovation milestone was the full completion of the west wing and south addition of the VMMB, scheduled for October 2006. We noted that the CMN developed schedules aimed to meet this date and monitored it throughout the renovation process. When necessary, schedules were revisited regularly to ensure the project remained on track and modifications were made to the schedule to adjust for unforeseen situations (for example, labour shortages or material delays). These affected the CMN's ability to meet its original schedule. As such, portions of the west wing opened to the public on time in October 2006, with the Bird Gallery opening in December 2006, and a section of the Mammals Gallery scheduled to open in the spring 2007. With some exceptions, the south wing was completed on time.

81. Conclusion. We found that the VMMB renewal project is meeting the CMN's needs. Since the CMN took over project management responsibility in January 2006, the Museum has in place an effective management framework for the VMMB renewal project.

Adequate processes are in place to manage renovation costs

82. The CMN has processes in place that provide adequate information for decision making relating to renovation costs. We found that project renovation activities are managed by an activity-based process and that, before the activities are undertaken, an assessment and approval process is in place and is followed. The CMN authorizes the renovation activities, according to its delegation of financial signing authority and its contracting policy.

83. Renovation activities resulting from a change in the original project design are reviewed and approved. The CMN has put in place an escalating scale of approval, which includes the Board's approval for significant change in the parameters of the original project design. The CMN also has processes in place that monitor renovation costs adequately. The CMN approves the monthly progress claims according to its delegation of financial signing authority.

84. The CMN monitors the project's budget and the cash flows on a monthly basis. The Vice President and Chief Operating Officer reviews the project budget on a quarterly basis and approves the transfer of unallocated funding to specific line items and the use of contingency funds. We noted that the budget and the progress of the project are documented in various reports, which are disseminated to the project stakeholders, including the Board of Trustees.

85. **Conclusion.** The CMN has adequate processes in place to manage renovation costs.

The Canadian Museum of Nature has attempted to balance its needs with heritage preservation

86. The CMN, as a Crown corporation, is not required to conform to the Treasury Board's Heritage Building Policy or to consult the Federal Heritage Building Review Office (the FHBRO) to receive advice to protect its heritage building. No follow-ups to National Historic Site designations are conducted. Federal Crown corporations are also not bound by statutes of lower levels of government.

87. Best practices for heritage sites are defined in numerous publications, including Parks Canada's *Standards and Guidelines for the Conservation of Historic Places in Canada*, based in part on technical standards common to the conservation community and international charters.

88. The CMN has chosen to follow aspects of the Treasury Board Heritage Building Policy and FHBRO best practices, despite not being required to do so. The Museum collaborated with the FHBRO and chose to follow the process associated with the FHBRO, as long as it is not detrimental to the Museum's curatorial requirements. Collaboration between the CMN and the FHBRO resulted in decisions that helped preserve the heritage character of the building. The Museum has also adhered to the City of Ottawa's Building Department's directives, which enforce the requirements of the Ontario Building Code. We encourage the CMN to continue working closely with the FHBRO and other organizations to help preserve the heritage character of the VMMB.

Some heritage restoration will not be completed

89. Despite the CMN's efforts to maintain the heritage character of the VMMB, it was not possible to complete restoration on certain heritage features for several reasons, including costs related to the condition of some heritage features and curatorial requirements. For example, the VMMB atrium's mosaic tile floor, which sank when the original tower shifted at the turn of the last century, could not be lifted and reinstated, in an economical way. The Museum also considered reinstalling the skylights; however, it decided against them, due in part to the location of mechanical equipment located on the roof of the building.



Mosaic floor revealed

Source: Phote by Martin Lipman, reproduced courtesy of the Canadian Museum of Nature, Ottawa, Canada

90. **Conclusion.** As a Crown corporation, the CMN does not need to comply with federal laws and regulations regarding renovation of its heritage-designated building. However, it has opted to do so in certain cases. The CMN has attempted to balance its needs with heritage preservation.

Environment and sustainable development **91.** Environmental management systems and practices are key measures needed to support sustainable development objectives in organizations. To put sustainable development into practice, organizations need to apply an integrated approach to planning and decision making that takes the environment, as well as economic and social factors, into account. At the operational level, this means identifying and addressing major environmental risks and opportunities and reducing or eliminating any adverse environmental impacts, associated with an organization's facilities or activities.

92. Environmental stewardship refers to the responsibility to care for land and the biodiversity it supports, to sustain and enhance it for present and future generations.

93. We expected the Canadian Museum of Nature to have appropriate systems and practices in place to address the following:

- risks to employees, visitors, and the external environment associated with hazardous substances (including hazardous waste);
- environmental risks and opportunities in the context of ongoing operations at its facilities and the renewal project at the VMMB; and
- unique challenges and risks associated with its stewardship responsibilities.

Corporate environmental management systems and practices need improvement

94. We found some examples of sustained corporate initiatives intended to make a difference for the environment. For example, environmental risks and opportunities have been identified for museum laboratories, and procedures have also been identified to address those risks. Mitigation measures to sustain the natural state of the NHB site include water table management through annual filling and draining of the pond, native plantings that are replaced annually, and special provisions in snow removal and landscaping contracts. The Museum developed a policy on pesticides in 1998. We also noted that an environment action committee dealt with a number of

environmental risks and opportunities as they arose, such as discussions around more reuse, recovery, and recycling. The Museum addressed environmental risks and opportunities and developed appropriate procedures required in the contract requirements of the construction contractor for the VMMB renewal project.

95. The Museum has not conducted a comprehensive or systematic evaluation of all its activities, lands, and facilities to identify environmental risks and opportunities. Attention was paid to environmental stewardship issues during, and in the years following, the construction of the NHB (1996). A monitoring program of the characteristics and related integrity of the site was undertaken for five years in order to establish baseline information regarding the site and the Museum operations. The Museum adopted an environmental ethics policy in 1991. The Museum relies on individual employees to fulfill roles and responsibilities related to the environment. We have seen no evidence of comprehensive monitoring and reporting of environmental performance, including that related to stewardship of its lands since 2001. We have also noted that the Museum has not developed a regularly updated summary of applicable environmental laws, guidelines, and codes of practice at the corporate level.

Economic considerations restrict environmental alternatives

96. Recommendations and costing implications were developed for environmental sustainability proposals for the VMMB renewal project. The Museum dropped the majority of recommendations, however, due to economic considerations. Low-cost environmental options such as planting trees on museum grounds and establishing a bus stop near the Museum were adopted. Some options such as choosing to reuse hardwood flooring and recycling demolished material were selected, while others such as renewable energy proposals (solar, wind) and the construction of a "living wall," with higher costs, were not.

Oversight of hazardous substances is adequate

97. The Museum keeps comprehensive inventories of chemicals and other substances used in laboratories and for collections activities. However, we found that risks identified for individual laboratories are done from the perspective of health and safety issues, and not necessarily from an environmental perspective. The research and collections functions are responsible for the waste generated through their activities and operations and are aware of the types, locations, volumes, and toxicity of waste products created. A guidance document covering policies and procedures to manage hazardous substances and

related wastes was developed for the Museum in 1999. It served as a foundation document for developing other procedures to manage hazardous substances.

The Museum needs to review its stewardship practices

98. The CMN has environmental stewardship responsibilities for two green spaces—the 49 hectares surrounding the NHB in Gatineau, Quebec, and the 8 hectare, Osgoode wetland property located outside of Ottawa, acquired as partial compensation for construction of the NHB on a wetland site. The Gatineau site is a valuable piece of green space with a high level of biodiversity in the middle of an expanding urban area, while the Osgoode wetland is part of a provincially significant wetland. Plant species rare to the region have been identified on the NHB property, such as the Clinton Wood Fern.

99. In 1996, as part of the activities supporting environmental stewardship of the NHB site, the CMN developed the Environmental Stewardship Plan (the Plan) with the aid of consultants and a roundtable of prominent experts. The Plan's purpose is to minimize the impact of constructing the NHB on the wetland and to conserve the site's biodiversity into the future. The Plan presents 29 recommendations to manage the stewardship of the site. At the time of writing this report, the Plan was available to the public on the Museum's website.

100. The CMN carried out environmental monitoring during construction and for five years after the completion of the NHB facility. This was a key component of the Plan and a starting point for stewardship of the site. We found that the CMN has reduced its stewardship monitoring activities. Currently, the Museum has not delegated ongoing responsibilities related to the Plan to its staff. There has been no formal, ongoing monitoring of the characteristics and related integrity of the NHB site and no active tracking of progress to oversee implementation of the Plan's recommendations since 2001.

101. We also noted that the CMN does not have a formal policy or guidelines for access to, and use of, the NHB site. A tour of the external boundaries of the property shows that there are no barriers to control public access and there is only one sign to indicate that it is Museum property. The boundaries of the site are also not well delineated. The site has been used by the public in ways that may negatively affect the ecological integrity of the wetlands and other areas on the site. For example, there is evidence of campsites, and



Camp site on the Gatineau property



All-Terrain Vehicle tracks on the Gatineau property

movement in and out of the site by people, bicycles, and all terrain vehicles. Given that the property is located in a fast-growing urban community, access to the site is likely to increase.

102. In terms of the Osgoode wetland site, we noted that CMN staff do not make regular monitoring visits to the site. While relatively isolated from human activities and development, we observed that there is no signage to identify it as Museum property. Although the site does not currently appear to be harmed by human intervention, the Museum should carry out some surveillance activities to ensure that this status continues.

103. Conclusion. The CMN has some systems and practices in place to address environmental issues. It has not conducted a comprehensive or systematic identification of all its activities, lands, and facilities to identify environmental risks and opportunities, and there is no recent comprehensive monitoring or reporting of environmental performance. The Museum has not developed a regularly updated summary of applicable laws, guidelines, and codes of practice. Environmental stewardship of the NHB site in Gatineau and surveillance of the Osgoode site need attention.

104. **Recommendation.** The Canadian Museum of Nature should review its current practices vis-à-vis the Gatineau and Osgoode properties to ensure that these greenspaces are cared for and that they retain their ecological value.

105. **Recommendation.** The Canadian Museum of Nature should improve its environmental management and sustainable development systems and practices by

- developing a framework to guide, among other things, planning and priority-setting, monitoring and reporting of environmental performance, ongoing environmental stewardship, compliance, and education; and
- formalizing existing environmental policies, procedures, and committee structures, and establishing clear accountabilities.

Information technology

106. Information systems provide important support to all sectors and activities of the CMN. The Museum's information systems include an online catalogue that allows visitors to search available information about the collection, a collection management system, financial systems, internal communication capabilities, other systems that support operations, and the Museum's website.

107. We expected the CMN's planning, development, implementation, and management of information technology and information management systems to support the Museum's strategic and operational objectives, including accessibility, to ensure business continuity and to satisfy informational needs at an acceptable cost and on a timely basis.

108. In 2002, we observed that the Museum needed to assess all of its medium- and long-term information technology needs and identify opportunities. It also needed to consolidate information on its hardware and software needs, as well as the timeframe and necessary resources to modernize systems, maintain and update applications, and train staff and conduct succession planning for application managers. The Museum also needed to draw a clear link between the information technology commitments in the corporate plan and the resources necessary to achieve them.

The Museum has made improvements since 2002

109. We noted that information technology (IT) medium- and longterm needs are contained in corporate documentation. The Museum developed an IT Strategic Plan. We also observed that the CMN consolidated information on its needs, timeframes, and resources through its new IT Strategic Plan; and through development of the new IT outsourcing contract. The Museum established an IT Strategic Planning Committee and an IT Strategic Plan, and through them it has drawn a link between the information technology commitments in the corporate plan and the resources necessary to achieve them.

Systems and practices are in place to support CMN priorities and activities

110. The CMN has strategic and operational plans for IT, which support the Museum's activities and priorities and meet the current needs of the Museum. In addition, it has other policies, procedures, and guidelines in place, which guide IT operations. The Museum has in place two standing committees that deal with IT issues:

- the IT Strategic Planning Committee, which includes the IT manager and representation from key areas of the Museum to develop corporate IT priorities and the IT Strategic Plan; and
- the IT User Workgroup, with representation from the Museum and from the outsource service provider, which reviews and addresses IT operational issues.

111. Furthermore, a network-wide IT Threat and Risk Assessment is included in the Museum's Management of Information Technology Security (MITS) compliance plan, and this assessment has recently been funded for implementation. The Museum should continue to match priority projects with available resources to reach its goals of MITS compliancy, to deploy its IT projects planned for 2006–07 and 2007–08, and to take full advantage of all the new services provided by its new outsourcing contract.

The Museum has signed a new contract for IT services

112. In 2006, the CMN signed a four-year contract with a new IT service provider. This contract takes into account the needs of both the individual user and the Museum as a whole and helps to mitigate IT risks. The contract provides the Museum with the option to extend the term of the contract for three additional periods of two years under the same terms and conditions.

113. We found that the contract provides the Museum with comprehensive IT services and service levels (for example, it operates on a 24-hour, seven-day basis) and covers the main areas and contractual requirements of an IT environment. Furthermore, the contract provides a wide range of new and improved IT services for the Museum at significant cost savings and includes a mandatory user-satisfaction survey.

A disaster recovery plan for IT is in place

114. Business continuity and disaster recovery planning for IT represent a major component of any organization's overall strategy. The new IT outsourcing contract assigns responsibility to the provider to set up and manage a secure network environment.

115. We found that information systems are available and usable when required and are designed to resist attacks and recover from failures. The Museum has developed a business continuity plan that includes a complete backup regime. The backups are tested once a year. A formal monthly reporting on specified service criteria and problems encountered is made to the CMN by the service provider and solved immediately, as they are detected.

116. **Conclusion.** The Museum has systems and practices in place to ensure that the planning, development, implementation, and management of information technology and information management systems support the Museum's strategic and operational objectives,

ensure business continuity, and satisfy informational needs at a reasonable cost and on a timely basis.

Human resources 117. The CMN's success largely depends on the quality and performance of its employees and volunteers. For this reason we expected human resources to be managed in a manner that provides the Museum with the core competencies and skills it needs to achieve its strategic and operational objectives.

Significant improvements have been made since 2002

118. In 2002, we found that the CMN needed to provide additional information on activities and to estimate the human and financial resources necessary to achieve the human resources plan. We also found that the Museum needed to clearly indicate the extent to which these activities would help to achieve its strategic objectives. The Museum needed to continue to invest in human resource management to ensure that it has a competent workforce in the short and long term. Finally, the report found that individual performance management could be strengthened.

119. Since that time, we found that the Museum has made significant improvements. The CMN has updated its HR management framework. Human Resources Management Services also plays a more active role in the Museum's strategic and operational processes. In addition, in 2002 pay equity issues were addressed for the period 1999 and beyond with the ruling reached between the union representing the majority of CMN employees and CMN management, as well as with a new classification system. The CMN also established a new competency model, which supports performance management, training, and recruitment. Finally, the Museum is currently developing a staffing policy and procedures to be completed by December 2006, as well as succession plans that address all key positions, to be completed in spring 2007.

HR strategic orientation supports the CMN's overall objectives

120. The Museum has several key components in place to guide HR activities to support the CMN's overall strategic and operational objectives. As mentioned in paragraph 119, HRMS has increased its visibility and plays an active role in strategic and operational planning within the Museum. It actively participates in the recent corporate strategic planning exercise and is involved in ongoing Museum management committees.

121. The Museum's human resources framework contains objectives, desired outcomes, and performance indicators, which complement the Museum's strategic and planning priorities. The Museum also has in place an HR priorities plan that outlines priorities for HR management in the short and medium term. This plan is updated annually.

Communication needs to improve

122. We found that improvements need to be made regarding staff understanding of HR plans and priorities within the Museum. The CMN is aware of this challenge and has committed to review its existing communication strategy to identify the optimal time to communicate with staff regarding HR issues.

123. We also found that HR roles and responsibilities within the Museum were not clearly defined and communicated to staff. As a result, the Museum has committed to review the mechanisms in place to define and communicate HR roles and responsibilities within the organization.

Good practices are in place

124. We found good practices in place including

- an HR planning system that allows the CMN to determine its present and future staffing requirements, including the competencies required to meet strategic and operational objectives;
- a staffing system that allows the CMN to recruit sufficient staff with the required competencies and knowledge;
- succession management, with development of a succession plan and related strategies for specific key positions; and
- training and development.

125. We found that performance evaluations are completed for individual employees, although they are not always completed on time; there is not always periodic feedback throughout the year; and there is a perception that managers are not involved in the staff performance assessment. The Museum plans to develop an action plan to strengthen managers' role and HR Services' oversight of the process.

126. **Conclusion.** We found that significant improvements have been made since 2002. Good practices are in place that provide the Museum with the competencies and skills it needs to achieve its objectives and that allow it to plan for the future. However, we found that the CMN

needs to improve its communication strategy with respect to HR plans and challenges.

Strategic planning
 127. Strategic planning assists the CMN to achieve its mandate. The Museum can undertake strategic planning in a number of ways, reflecting its corporate culture and its current context. Within the context of this Special Examination, strategic planning was defined as the process of

- assessing the CMN's current business environment;
- defining its vision;
- deciding what the Museum would look like in five years (desired position);
- recognizing its strengths, weaknesses, opportunities, and threats; and
- mapping out strategies from its current position to its desired position.

128. Annual planning activities such as the annual corporate planning process were expected to be aligned with the strategic directions but were considered operational plans, despite their five-year time horizon. This was due to the fact that they did not revisit the positioning of the Museum, nor were they aimed at revisiting the strategies set out as part of the strategic planning process. The Museum prepares a corporate plan annually, as well as an operational plan.

129. We expected the Museum to have clearly defined strategic directions and specific and measurable goals and objectives to achieve its legislative and public policy mandate. We also expected the Museum's strategic direction and goals to take into account government priorities, identified risks, and the need to control and protect its assets and manage its resources.

The CMN has made some improvements since 2002

130. In 2002, we noted that the CMN needed to clarify its strategic direction, including defining concrete results for which it is accountable. We also identified some concerns regarding the Museum's understanding of client groups.

131. Since then, the CMN defined, with more precision, its strategic direction and expected results. There is a clear alignment between strategic, corporate, and the operational plan. The Museum tracks its

performance against each strategy using explicit performance measures. The CMN addressed its need to better understand its client groups and their needs to serve Canadians through a market research and visitor study-function audit. It also improved its strategic resourceallocation decisions with a detailed long-term capital plan.

Strategic planning is adequate

132. The CMN has developed a corporate vision that generally reflects its business conditions (for example, Canadians' interests as captured by CMN surveys; CMN's economic capacity) and is consistent with the *Museums Act*. Led by the President and CEO, the Museum conducts consultations—with CMN management, staff, stakeholders, and other outside sources—to identify fundamental issues and imperatives that result in the development of a vision theme (for example, connecting people with nature), strategic goals, and core strategies for the CMN that guide the Museum over a five-year period. These strategies are then carried forward into the Museum's operational planning process. The strategies and goals are operationalized over a one-, three-, and five-year time frame, with an annual budgeting process that is captured in the Museum's corporate plan. Museum management participates in this exercise.

133. We found that the Museum has strategic, corporate, and operational plans that are aligned and consistent with the strategic directions of the Museum. The strategies are consistent with the desired positioning of the Museum and take into account key issues and imperatives it has identified. The strategic planning calendar provides a structured, timely, and integrated process that allows the Museum to meet its statutory and Board of Trustee reporting requirements.

134. Although the CMN identifies fundamental issues and imperatives in part through a consultative process, it currently does not systematically identify and integrate strengths, weaknesses, opportunities, and threats in all areas of Museum activity. This information could result in better alignment of the desired position and the capacity of the organization.

135. In addition, systems and practices are not yet fully integrated with some of the core management processes. For example, performance measurement and risk management are not integrated to provide additional information to enhance strategic decision-making. While the operational planning process does benefit from performance information (and risk management as a corporate-wide process is

relatively new), the current strategic planning process relies heavily on the consultative work undertaken, as part of the process itself and on senior management's knowledge. However, it has begun to integrate the elements of the new management-control framework in place.

The strategic plan is well communicated

136. We found that the strategic plan is well communicated. Given the participatory nature of the strategic planning process, management and staff are aware of its contents through its involvement in the process.

Integrating a corporate risk perspective into planning is important

137. The Museum took into consideration potential risks, addressing them at various points in the consultation and strategic planning process. However, while it has started work to build such a capacity, the CMN does not have a complete corporate risk management framework that could be integrated into the strategic management process. The CMN needs to continue the corporate risk management work begun to provide for a complete view of its risks and better integration of risk management, as it assesses its current business environment and decides on its future position.

Monitoring progress on strategic direction is adequate

138. The CMN performs ongoing tracking and monitoring of progress against strategic goals and priorities. We found that the performance measurement process was effective in measuring the performance of the Museum against objectives. Reports are regularly generated and reviewed by management, thus allowing deviations to be identified, and management action initiated. Performance information allows the CMN to track its performance historically and determine its challenges around specific objectives. However, we found that the performance measurement information is not consistently used in the strategic planning process. This could better inform the strategic planning process to incorporate lessons from past performance.

139. **Conclusion.** The CMN has systems and practices in place to define strategic directions and specific and measurable goals and objectives to achieve its legislative and public policy mandate. Its strategic directions and goals take into account government priorities, identified strategic issues, and the need to control and protect its assets and manage its resources economically and efficiently. However, while the strategic planning process has matured since the last special

examination, it still requires some improvements that would ensure a better integration with other management processes, while minimizing its reliance on key individuals. The CMN does not systematically identify strengths, weaknesses, opportunities, and threats in all areas of Museum activity to enable it to implement a thorough analysis during the strategic planning process.

140. **Recommendation.** The Canadian Museum of Nature should continue its efforts and improve its processes around identifying strengths, weaknesses, opportunities, and threats; benchmarking, and historical performance analysis, and integrate corporate risk information to allow it to better grasp the issues it is facing to guide future strategic planning.

Performance measurement and reporting

141. Clear measurement and performance reporting are essential to meeting public sector expectations for accountability and transparency in a Crown corporation. Information on outcomes tell Canadians whether the Museum has reached its intended impacts. We expected the CMN to have identified performance indicators to measure how well it is achieving its mandate and statutory objectives. We also expected that it would have reports that provide complete, accurate, timely, and balanced information for decision making and accountability reporting.

Performance measurements focus primarily on activities and operational data

142. In our 2002 Report, we noted that the Museum's performance indicators focus on operational data and activities. We found that the performance measures for accountability reporting continue to generally reflect activities and outputs.

Performance measures for accountability reporting could be improved

143. The Museum publishes two accountability documents every year: the corporate plan and the annual report. These are the main ways the Museum publicly discloses its commitments and objectives and the extent to which it achieves them. The Museum also has quarterly reports, which contain performance measurement information and are provided to CMN management and the Board of Trustees.

144. The corporate plan outlines the CMN's strategic issues, objectives, strategies, and performance indicators, as well as a financial summary. Each objective and related strategy include selected performance indicators and targets for a five-year timeframe.

145. In the 2004–05 Annual Report, the CMN reported on its performance using 24 indicators and targets. We found that there are qualitative and quantitative indicators to measure performance; however the majority of indicators addressed activities or outputs rather than outcomes. The indicators reported in the annual report are consistent with those reported in the corporate plan. Information presented is balanced, including both strong and weak performance. We also found that quarterly reports are provided to the Board and management in a timely manner. However, we found that gaps between planned targets and actual results are discussed during meetings, but are seldom documented.

146. We recognize that measuring outcome achievements is difficult and challenging. We encourage the CMN to build on the performance measurement systems in place to provide a full performance story of its successes and challenges.

147. Conclusion. Performance indicators are consistent between the corporate plan and annual report. Quarterly reports are provided in a timely way to CMN management and to its Board of Trustees. However, we found that the CMN provides information on activities and outputs in its annual report, but it has not yet developed longer-term performance indicators. In addition, gaps between planned and actual targets are discussed but not often documented.

Governance 148. Corporate governance refers to the structures, systems, and practices for overseeing the direction and management of an organization, so it can carry out its mandate and achieve its objectives. In order to maximize its effectiveness, we expected that the Museum would have a well-performing corporate governance framework, which meets the expectations of best practices in Board stewardship, shareholder relations, and communication with the public.

149. The CMN is managed by a Board of Trustees with 11 external members, including the chair, all appointed by the Governor in Council. Five committees support the Board: the Executive Committee, Committee of the Whole Board, Audit and Finance Committee, Community and Government Relations Committee, and the Nominating Committee.

Certain aspects of the governance framework need to be improved

150. We found that the Board of Trustees has established some elements of a good governance framework. To meet its governance needs, the Board established "the Committee of the Whole Board"

in 2005 to replace the VMMB Renovation Committee, which oversaw the planning and implementation of the renewal project. This was done in response to the desire of the trustees to be closely informed of the renewal project process. This committee is involved in the decisions that support the VMMB Renewal Project. In addition, the Board has eliminated its Campaign Committee and has transferred the responsibilities of this committee to the Community and Government Relations Committee.

151. All Board committees have terms of reference. In October 2006, the Board updated and approved the current committee terms of reference. The bylaws of the CMN will also be revised accordingly.

152. However, we also found a number of Board systems and practices that need to be improved in order to meet current good practices in governance for Crown corporations.

153. Roles and responsibilities. The terms of reference of the Audit and Finance Committee include all functions related to Human Resources. We found that, although these functions are identified as a potential business item for the committee, they are not addressed on a regular basis, nor are they addressed as an activity in the proposed committee assessment to be used in the upcoming committeeeffectiveness survey. There is no annual work plan to address the responsibilities of this committee; the committee works with a standing agenda.

154. Board's renewal and composition. In March 2006, the Board updated its profile outlining the mix of competencies, skills, and experience required to meet the Museum's needs. The Nominating Committee met several times over the past year to review potential candidates who would meet the Board profile. The Board made recommendations to the Minister of Canadian Heritage for consideration in filling Board vacancies. Recommendations by the Board to the Minister for candidates are not done proactively to prepare for upcoming vacancies, although members remain as trustees until such time as a replacement is appointed. Five positions were filled during the 2005 calendar year. At the time of writing this report, only one position, that of vice chair remained vacant.

155. A formal analysis of gaps in skills and experience within Board composition compared to the desired profiles was completed in March 2006. This information is important for identifying potential nominations and making recommendations to the Minister about filling Board vacancies.

156. We also found that the current Board profile does not reflect the need for the Chair of the Audit and Finance Committee to have financial expertise (although the current Chair does). The latest gap analysis identifies skills and knowledge required in order of importance, including financial accreditation as primary importance, although it does not stipulate that this is a requirement for the chair of this committee.

157. Board performance. The Board has initiated a process to assess its own performance, consistent with good governance practices. Because of the number of vacant positions and new members at the time the assessment was conducted, the exercise may not have been conclusive. With the exception of the Community and Government Relations Committee, the Board has also approved assessment tools for individual committees. These tools will be used in yearly assessments. The Board needs to continue to conduct such assessments and share the results with the trustees to address specific concerns and issues on their part, while improving Board effectiveness.

158. Orientation. A complete information package is provided to new members on their roles and responsibilities and includes information on the business sector and its environment. A formal orientation program is in place and was attended by all new members. Formal orientation on committee roles and responsibilities is not provided to members nominated to a committee, other than verbally by the Chair of the Board.

159. **Training.** The CMN generally holds one training session or workshop per year. Although some training sessions and workshops are provided to trustees in key areas, these sessions need to be provided on a regular basis to ensure all new members attend.

160. **Strategic direction.** The Board is responsible for establishing the Museum's strategic direction. In 2002, the Board participated in a planning retreat with senior management to discuss the Museum's strategic issues and to provide guidance on the strategic direction to pursue for the next five years. This new direction became the basis of the content of the corporate plan for 2003–04 to 2007–08. The Board also approves the corporate plan annually.

Corporate performance information

161. The Board of Trustees receives sufficient and timely information to enable it to make decisions for the VMMB renewal project. The

Board is provided with detailed quarterly reports and ongoing information on the project.

162. While most reports to the Board provide a good overview of what is going on in the Museum, additional reporting needs to be provided to the Board and its committees on a regular basis. For example, reporting on the risk management and human resources management process needs to be provided to the Board, as well as information regarding the development of the collection.

The Board should continue its role in the oversight of corporate risk

163. The 1996 federal guidelines on Corporate Governance in Crown Corporations state a Board should ensure that the principal risks of the Corporation's business have been identified and that appropriate systems and practices to monitor and manage these risks have been implemented. In 2005, the government indicated that it will require all Crown corporations' audit committees to establish risk assessment and management mechanisms to mitigate those risks.

164. A strategic risk assessment was conducted in the fall of 2005. A previous risk assessment was completed in 2002. CMN has developed a formal, strategic risk management framework that includes a risk management policy and systematic approach for the identification and monitoring of risks. Steps have been taken to achieve this, including a strategic risk assessment workshop in the fall of 2005. A draft risk management policy has been developed, which has identified the risk management process as a responsibility of the Board of Trustees. The policy also identifies the Board as responsible for establishing the acceptable level of risk (risk tolerance). These Board responsibilities were defined and approved by the Trustees in their revised Roles and Responsibilities (June 2006).

Values and ethics policies and practices

165. Recent events in both the private and the public sectors highlight the need for all organizations to have a sound framework of values and ethics. Regulatory bodies and government central agencies are defining related policies, processes, and practices that organizations are to adopt. The Museum has a conflict of interest and post employment measures code, updated in 2004, which applies to its employees and Board of Trustees.

166. In 2003, the government issued a *Values and Ethics Code for the Public Service* and urged public service institutions not covered by the

Code to respect its spirit and adopt similar provisions for their organizations. CMN reviewed its existing practices and, in 2004, developed its Values and Ethics at the Canadian Museum of Nature: Conflict of Interest and Post Employment Measures Code. Bill C-11, the Public Servants Disclosure Protection Act (that is, whistle-blowing legislation) has received Royal Assent but has not yet been brought into force. Once brought into force, it will apply to the Museum. CMN developed an Employee Disclosure Protection Policy in 2005 and is awaiting developments in this matter to formally adopt such a policy. The Board will need to ensure that the Museum's existing practices comply with any recent developments as they are officially adopted.

167. Individual board members are appointed by the Governor in Council and are therefore subject to the *Conflict of Interest and Post-Employment Code for Public Office Holders*. All new members are provided with a copy of the policies and are required to complete a confidential report, when nominated to the Board.

168. The CMN management is presently developing a protocol and controls on "Fraud and Error." The Board has revised the terms of reference of the Audit and Finance Committee to redefine its role to enhance its oversight practices of standards of integrity and ethical matters. The oversight practice of the Committee needs to include regular reports of specific situations where conflicts of interest occur, ongoing monitoring of compliance with the applicable codes, and means to address areas of non-compliance.

The internal audit function has improved since 2002

169. In our last special examination, we had encouraged the Museum to pursue and strengthen its risk analysis, according to targeted results and new events, and the involvement of managers. A risk analysis was performed in 2002, which resulted in a detailed five-year internal audit plan in 2003. As mentioned in paragraph 164, a risk assessment was completed in 2005. The Audit and Finance Committee needs to ensure that the internal audit plan continues to reflect the risks, as identified by the Museum, through regular assessments; and the Committee needs to closely monitor its implementation and the results of the audits conducted.

170. A number of the internal audits identified in the five-year plan adopted in 2003 have been completed, and the results were presented to the Audit and Finance Committee. The audit plan is reviewed annually by the Audit and Finance Committee to ensure it continues

to reflect identified risks. We noted that the Audit and Finance Committee receives the internal audit reports and recommends their approval to the Board.

171. Conclusion. The Board has many elements of a functioning governance framework in place. The Board needs to implement additional systems and practices, as well as formalize and improve existing ones to meet current good governance practices.

172. **Recommendation.** The Board of Trustees of the Canadian Museum of Nature should

- update museum bylaws to reflect the revised Board committees' terms of reference;
- implement a proactive Board succession process to recommend in a timely way a list of potential candidates to the Minister of Canadian Heritage; and
- define its information needs to ensure that it continues to fulfill its responsibilities.

The Board of Trustees' response. The Board of Trustees of the Canadian Museum of Nature accepts the special examination report. It is pleased that the report states that the Corporation's systems and practices provide reasonable assurance that assets are safeguarded and controlled, resources managed economically and efficiently, and that operations are carried out effectively.

The Board of Trustees appreciates the positive acknowledgement of the concerted work that it has done continuously to improve its governance practices. Trustees have benefitted greatly from the provision of a thorough orientation to CMN and to their Board and Committee roles and responsibilities. The Museum's value for continuous learning ensures ongoing attention to training and development. The Board knows that its current work on self-assessment is in the forefront of best governance practice.

The Board notes that the report identifies opportunities to enhance the quality of some corporate systems and practices. It is pleased to note that actions addressing all of these recommendations have been in progress for some time. The Board will review the specific recommendation concerning governance at its annual retreat and determine whether any additional work is required in the areas noted. It will support management in responding to findings highlighted in the special examination report.

Management's response. The management of the Canadian Museum of Nature notes that in the opinion of the Auditor General there is reasonable

assurance that there were no significant deficiencies in the systems and practices examined.

We are pleased that the examination finds that the Museum has completed the work to address the majority of the issues raised in the special examination conducted in 2002. The formulation of a collections development strategy for the future is a joint undertaking with the other members of the Alliance of Natural History Museums of Canada and the Museum is in the process of finalizing a positioning strategy.

In addition, the report recognizes the work that has been done to date with respect to developing a corporate risk management framework.

Museum management notes that the renovation of the Victoria Memorial Museum Building is a significant and demanding challenge that was punctuated by the successful reopening of the renewed West Wing and continues to be a very large focus. We are pleased to note the observation that the Renewal Project has an effective management framework in place.

Museum management acknowledges the importance of reporting on its ongoing and concerted work as steward of properties in Gatineau, Osgoode and central Ottawa. CMN's Environmental Stewardship Program will be reviewed in 2007-08 as scheduled.

Museum management appreciates the positive acknowledgement of the innovative work to create a national network and to work in partnership with the other natural history museums across Canada as the Alliance of Natural History Museums. The network has made remarkable progress on several fronts in a very short time. Most significantly, the members have surveyed and analysed their collections holdings and collective scientific expertise with a view to establishing a national collections development strategy. Once the strategy is achieved, member museums will negotiate their respective roles and responsibilities in documenting the natural environment of Canada.

Museum management is satisfied that the special examination report acknowledges that severe financial constraints are restricting all of Museum programming and operational activities and that a solution must be found.

In future years, Museum management will take into consideration the observations and recommendations made in the special examination report and will continue to look for ways to achieve improvements in its operations within the economic constraints of the corporation.

Appendix A About the Special Examination

Systems and practices examined and related criteria

Key systems and practices	General examination criteria
Research Management	We expect the Canadian Museum of Nature (CMN) to effectively select and manage relevant research to explore, reveal, and interpret, for all audiences, the natural world; and that the research activities would support the development of the national collection and the public education projects.
Research policy	
Research Advisory Committee	
Research Advisory Committee selection guidelines	
Museum partnerships	
Canadian Centre for Biodiversity	
Collections	We expect the CMN to establish, develop, and maintain a collection of natural history objects reflecting the policy scope of the Museum.
Collection development policy and plan	
Collections management system	We expect the collections to be effectively managed, safeguarded, documented, conserved, and made accessible.
Acquisition and de-accession practices	
Collections storage and protection practices	We expect that CMN to have long-term capital and maintenance plans in place for the facilities of the Natural Heritage Building (NHB) and the Victoria Memorial Museum Building (VMMB).
Storage facilities	
Risk assessment	
Agreements with the Canadian Conservation Institute	
Conservation plans and practices	
Security systems	
Public education projects (exhibitions, public programs)	We expect the CMN to effectively develop and maintain public education projects that will be recognized by client groups and peers as a key source of relevant information that furthers
Alliance of Natural Museums of Canada partnership	
• Exhibitions policy and an exhibitions management process	knowledge about the natural world, the environment, and our
• website	place in it.
VMMB visitor surveys	
Strategic Market Research Committee	
Program Planning Committee	
• Evaluations on public education programs and activities	
Victoria Memorial Museum Building Renewal Project	We expect the CMN to have made reasonable efforts to ensure effective management of the renovation of the Victoria Memorial Museum Building, so that renovations are completed on time and according to needs.
Contracts with the prime consultant and construction manager	
Risk management plan	We expect the CMN to have adequate processes in place to
Guidelines and manuals	manage renovation costs.
Renovation management framework	We expect the Museum to comply with relevant laws, policies, regulations, and best practices regarding protection of heritage sites.
Performance monitoring and accountability reports	
Annual internal audits	

Key systems and practices	General examination criteria
Environment and sustainable development	We expect the CMN to have appropriate systems and practices in place to address the
Planning and integrationPractices and proceduresMonitoring and corrective action	 risks to employees, visitors, and the external environment associated with hazardous substances, (including hazardous waste); environmental risks and opportunities in the context of
	 ongoing operations at its facilities and the renewal project at the VMMB; and the unique challenges and risks associated with its stewardship responsibilities.
 Information technology IT governance model IT Strategic Planning Committee IT strategic plan Outsourcing of Information Technology (IT) infrastructure operations. Performance score sheet IT audits 	We expect the CMN's planning, development, implementation, and management of information technology and information management systems to support the Museum's strategic and operational objectives, including accessibility; to ensure business continuity, and to satisfy informational needs at an acceptable cost and on a timely basis.
 Human resources Human resources (HR) planning system Training/Learning system Performance management system Job Classification and Evaluation System Compensation and Incentive system 	We expect human resources to be managed in a manner that provides the Museum with the core competencies and skills it needs to achieve its strategic and operational objectives.
Strategic planning • Strategic, corporate, and operational plans • Risk management exercise (2005) • Performance measurement • Planning calendar	We expect the Museum to have clearly defined strategic directions and specific and measurable goals and objectives to achieve its legislative and public policy mandate. The Museum's strategic direction and goals should take into account government priorities, identified risks, and the need to control and protect its assets and manage its resources.
 Performance measurement and reporting Internal audit function Risk-based audit plan approved by the Audit and Finance Committee Performance monitoring and accountability Evaluations completed on major public education programs and activities 	We expect the Museum to have identified performance indicators to measure the achievement of its mandate and statutory objectives. We also expect that it has reports that provide complete, accurate, timely, and balanced information for decision making and accountability reporting.

Key systems and practices	General examination criteria
Corporate governance	We expect the CMN to have a well-performing corporate
Board training and orientation	governance framework and practices that meets the expectations of best practices in Board stewardship, shareholder relations, and communication with the public.
Strategic and operational planning	
Functioning of the Board of Trustees and related committees	
Conflict of interest guidelines	
Audit and Finance Committee	
Internal audit	

Examination Team

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Appendix B Corporate Objectives and Strategies

Objective 1: To create and make accessible to the public relevant information about the environment and our place in it

The strategies to achieve this objective are

- Create an accessible program of national educational projects to encourage and foster formal and informal learning for Canadians.
- Create an accessible program of collections activities on issues that are relevant to Canadians.
- Create an accessible program of research activities on issues that are relevant to Canadians.

Objective 2: To contribute to building the capacity of Canadian natural history museums and other heritage agencies to respond efficiently and effectively to natural history issues of relevance to Canadians

The strategies to achieve this objective are

- Develop and implement national strategies in collaboration with the Alliance of Natural History Museums of Canada.
- Engage in joint efforts with other federal partners to create and make information resources accessible to diverse Canadian audiences, using innovative approaches, best practices, new processes, and techniques.

Objective 3: To provide vehicles to encourage public engagement in natural history issues and to contribute to informed public policy on those issues

The strategies to achieve this objective are

- Create national forums to discuss, debate, and share information on relevant environmental issues of concern to Canadians.
- Develop and implement formal mechanisms to inform public policy on natural history issues.

Objective 4: To develop the Canadian Museum of Nature (CMN)'s internal capacity to work in integrated, collaborative approaches

The strategies to achieve this objective are

- Through the application of the competency-based process, improve the ability of Museum staff to work in integrated approaches such as partnerships, networks, and multi-disciplinary teams.
- Apply the partnership framework to assess current partnerships and to modify partnership arrangements as required.

Objective 5: To ensure that the Victoria Memorial Museum Building (VMMB) Renewal Project furthers the vision

The strategies to achieve this objective are

- Implement the rehabilitation of the VMMB infrastructure requirements, design, and construction.
- Ensure the Renewal project is implemented according to the principles of the new vision.
- Maintain a base level of programming and visitor services at the VMMB during the Renewal Project to ensure that CMN and the VMMB remain visible and that the local audience is retained.

Objective 6: To maintain and improve an effective infrastructure of systems and facilities

The strategies to achieve this objective are

- Administer real property effectively and efficiently.
- · Develop, adapt, and streamline management and planning processes and services to support the Museum's vision.
- · Maintain and improve Museum information management systems and services.

Objective 7: To increase CMN's self-generated revenue.

The strategies to achieve this objective are

- Build a strong philanthropic base of support for CMN by identifying and securing private and public sponsorships, partnerships, alliances, and donations.
- Develop and implement strategies to generate revenue across all relevant business lines of the Museum.
- Seek funding solutions from the Government of Canada for facilities operations and capital expenses.

Appendix C *Museums Act*, sections 12(1)(*a*) to (*w*)

Capacity and powers of the Canadian Museum of Nature

12. (1) In furtherance of its purpose, the Canadian Museum of Nature has the capacity and, subject to this Act, the rights, powers and privileges of a natural person and in particular, but without limiting the generality of the foregoing, the Canadian Museum of Nature may

(a) collect natural history objects and other museum material;

(*b*) maintain its collection by preservation, conservation and restoration and the establishment of records and documentation;

(c) sell, exchange, give away, destroy or otherwise dispose of natural history objects and other museum material, other than primary type specimens, in its collection and use any revenue obtained therefrom to further its collection;

(*d*) exchange with, lend to or borrow from any other organization or person any exhibits, museum material, knowledge or information;

(e) organize, sponsor, arrange for and participate in travelling exhibitions, in Canada and internationally, of natural history objects and other museum material in its collection and from other sources;

(*f*) undertake and sponsor any research, including fundamental or basic research and theoretical and applied research, in the natural sciences, with special but not exclusive emphasis on its collection, and in museology, and communicate the results of that research;

(g) provide facilities to permit qualified individuals to use and study its collection;

(*h*) create new knowledge and synthesize existing knowledge into new patterns and models and provide a taxonomic data base for biological and geological research;

(*i*) foster the coordination of collection-based research in natural history in Canada;

(*j*) promote scientific literacy and a better understanding of nature by demonstrating the interrelationships among all organisms, including human beings, and their environment;

(*k*) inform the academic, scientific and technical community and the public of its discoveries and understanding of nature by such means of education and communication as are appropriate;

(*l*) provide expertise in natural history and provide informed advice and opinion on issues dealing with the natural world;

(*m*) establish authoritative centres for the identification of natural history objects and specimens;

(n) create and foster, through programs, functions and facilities, active public involvement and interest in the Canadian Museum of Nature, both at the community level and throughout Canada;

(o) establish and foster liaison with other organizations with a purpose similar to its purpose;

(*p*) share the expertise of its staff by undertaking and sponsoring programs for training and apprenticeship in the professional and technical skills involved in the operation of other organizations with a purpose similar to its purpose;

(q) assist, cooperate with and enlist the aid of other organizations with a purpose similar to its purpose;

(r) provide advice and expertise on museology, education and communication;

(s) acquire property by gift, bequest or otherwise and hold in trust or otherwise, expend, invest, administer and dispose of that property;

(*t*) develop, operate and maintain branches or exhibition centres;

(*u*) operate restaurants, lounges, parking facilities, shops and other facilities for the use of the public;

(v) lease or otherwise make available any of its facilities to other persons; and

(w) charge for goods, services and admission and use the revenue obtained therefrom for its own purposes.