A **National Collections Development Strategy**
For Canada's Natural History Museums

April 2011

Alliance of
Natural History
Museums of Canada

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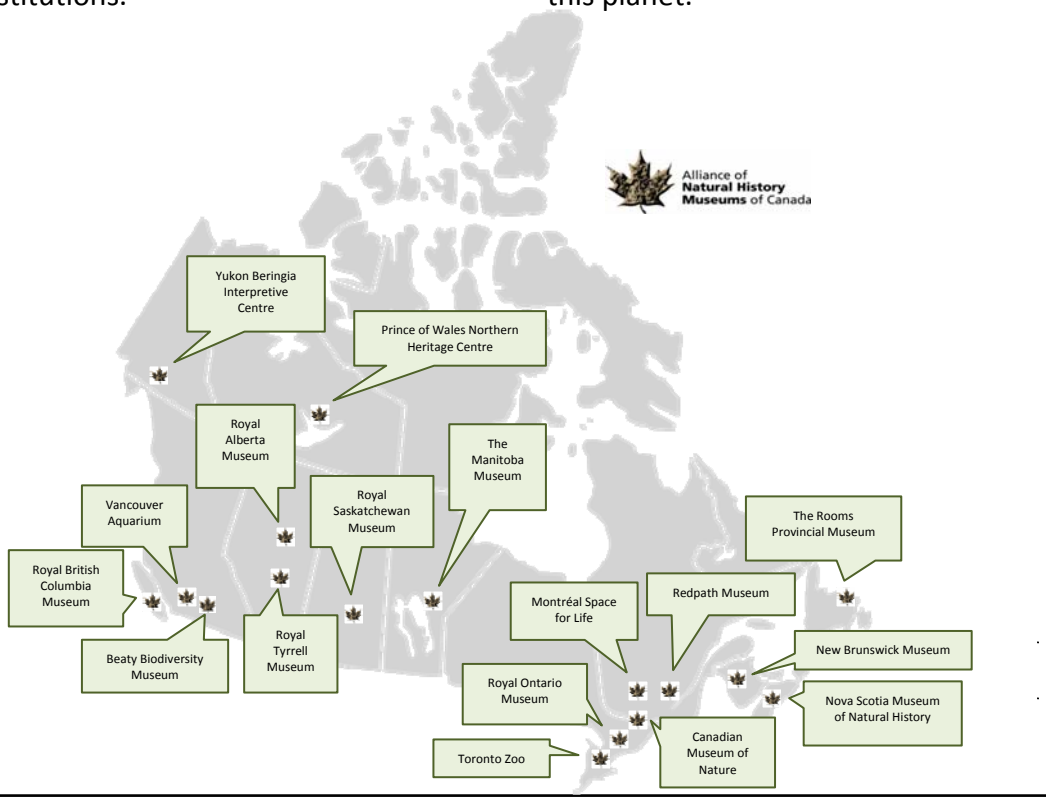
Alliance of Natural History Museums of Canada

The Alliance of Natural History Museums of Canada (ANHMC) was created in 2002 from a common desire among directors and senior curatorial staff, of Canada's key natural history museums, to establish a network for the exchange of information on issues dealing with collections, research and education. The ANHMC shares a concern for the image and perception of natural history museums and increased competition for public and private funding as well as a desire to enhance cooperation among institutions.

Incorporated in 2003, the network's primary objective is to *enhance the visibility, recognition and benefit of natural history museums under the shared goal of connecting people with nature*. Collectively, ANHMC members house 31.6% of all Canadian natural history collections. Together, the network identifies, shares, speaks out on and supports all issues on biodiversity in Canada and provides a historic perspective on the country's living environment since the beginning of life on this planet.



Foreword

By: Roger Baird

This document is the expression of an organization committed to being a source of inspiration and knowledge to the people of Canada and the global scientific community. The Alliance of Natural History Museums of Canada has consistently demonstrated a desire to work collaboratively and to deliver through this common commitment more than any one institution could accomplish on its own. No aspect of museum operations expresses this more fully than the mandate to document natural history through collecting and preserving specimens through time and space.

On a global level, Canada lacks the biological diversity of more equatorial countries. Nevertheless, Canada has a total area of 9,970,610 $km^{2.}$ It is the second-largest country in the world by surface area, and comprises 7% of the Earth's total surface area. It reaches more than 4,600 km from Cape Columbia on Ellesmere Island (Canada's northern extremity) to Middle Island, Lake Erie (the southernmost point), and measures 5,780 km west to east from Mt St Elias, Yukon to Cape Spear near St. John's, Newfoundland and includes 5 marine and 15 terrestrial ecozones. A major responsibility distributed among the Alliance is to ensure the preservation of collections, as the evidence of the flora and fauna and the geological record of these zones and as part of the history of Canada.

This document builds upon the initial collections survey and research profiles commenced in 2006 and the collections development implementation plan tabled in 2007. It is meant to act as a roadmap or guidebook for Alliance member institutions and their respective collections and research personnel, to guide them in developing their collections with a view to a larger perspective, to encourage and foster collaborations and to provide mutual support when called upon.

I am thankful for the generous support of the ANHMC Collections Committee members, for the diligence of Co-Chairs Harold Bryant (RSM) and Grant Hughes (RBCM) and the unfailing resolve of ANHMC Interns Elspeth Jordan and Jessica Freeborn to gather so many working drafts, survey responses and other communication into a compact, informative synthesis of many discussions and deliberations. While the journey continues, the path forward is clear and the destination is promising. -RCB

Introduction

A natural history collections development strategy, outlining sustainable management practices, safeguards the natural record and the quality of life for future generations.

On September 24, 2007, the Alliance of Natural History Museums of Canada (ANHMC) met to discuss a national development strategy for science-based collections. Based on this workshop, the network developed a vision involving building Canada's natural history collections to be a comprehensive, understood and valued source of information by the year 2028.

A National Collections Development Strategy for Canada's Natural History Museums represents the distillation of the principles and practices adopted by the Alliance as a road map to our common objective, and a window into the current strengths and priorities of the membership.

While each institution addresses and serves its own unique mission and mandate, the Alliance members are trustees to an estimated 19 million specimens. This document is a snapshot of how member institutions are collaborating at a national level to develop and preserve Canada's natural history record.

Collections in Context

The diversity of life in Canada is made up of vast ecosystems and species that are irreplaceable. External forces such as financial pressures and lack of public awareness and engagement threaten the way in which the natural science collections are protected. The country's natural history museums are at the centre of a nationwide effort to preserve these collections.

Native biodiversity in Canada is disappearing at a rate never before seen, the five major factors being habitat loss, exploitation, pollution, climate change, and invasive species. Natural history collections are vital in helping us document and understand these changes. They are the basis for our understanding about various biological, cultural and environmental trends. They also provide evidence to reinforce our concerns as well as noting improvements in the state of biodiversity.

Organizations which house these collections play a crucial role in preserving the natural record. Enhancing cooperation between institutions creates resource and knowledge sharing opportunities. Using strategic initiatives such as joint fieldwork, online collections access, travelling exhibitions and long-term loans, allows for growth within each institution while building Canada's natural history into one significant national collection. This collective effort is beneficial for all members as it provides access to a comprehensive network of information.

The study "*Canadian Taxonomy: Exploring Biodiversity, Creating Opportunity,*" conducted by the Council of Canadian Academies (CCA) in 2010, identified a number of issues critical to the future of Canadian natural history collections:

- *Insufficient support for bioinformatics*
- *Lack of national collections standards*
- *Shortage of biodiversity jobs and expertise*
- *Lack of public knowledge about collections values*

Canadians are increasingly aware that they are dependent on healthy, biodiverse environments for clean air, clean water and fertile soil, among numerous ecosystem services. The ANHMC's national collections development strategy seeks to address issues raised by the CCA, and ensure that natural history collections are preserved for the future and can be fully utilized in support of all Canadians.

The Strategy

The strategy has three goals:

- To **document** the diversity of life in Canada using specimens which provide evidence of what and where species currently exist, or once existed, in the nation.
- To provide information about biological diversity through digital and physical **access.**
- To **communicate** the value of collections to a broad audience.

By addressing these three goals, the following objectives can be fulfilled:

DOCUMENTATION	ACCESSIBILITY	COMMUNICATION
• Coordinating with Outside Organizations	• Adopting Standards	• Presenting Joint Exhibits
• Directing Orphan Collections	• Publishing Guidance Documents	• Preparing Travelling Exhibits
• Coordinating Research	• Identifying Funding Sources	• Communicating with Decision Makers
• Giving Right of First Refusal for Deaccessioned Specimens	• Streamlining Inter-Membership Loans	• Mounting "Behind the Scenes" Activities
• Fostering Connections with Zoological Institutions	• Setting Up Offsite Enrichment Programmes	• Defining Centres of Excellence
• Promoting Hiring of Experts and Staff Exchanges	• Sharing Resources	• Utilizing New Media
• Promoting Subject-Based Links	• Pursuing Digitization Projects	

Documenting Life

Maintaining a natural history collection requires a constructive long term development plan with a set of clear and manageable guidelines to follow. Collaborative projects, active collecting, practical disposal methods, and the promotion of taxonomic expertise ensure that fundamental information about species biodiversity is documented.

• **Coordinating with Outside Organizations** promotes partnerships with institutions that currently house specimens not found within the ANHMC's own collection. This type of collaboration provides valuable information that may be used to identify collections in danger of becoming orphaned or abandoned.

• **Directing Orphaned Collections** allows for the redirection of specimens to museums with the budget, space and expertise to house the collection, benefitting from their research and educational value.

• **Coordinating Research** acknowledges the benefit of combining research opportunities as a cost saving measure and allows for duplicate or supplementary specimens to be exchanged or donated to members who are not directly involved in field work.

• **Giving Right of First Refusal for Deaccessioned Specimens** ensures that specimens are disposed of ethically.

• **Fostering Connections with Zoological Institutions** creates opportunities to acquire endangered or protected species posthumously.

• **Promoting Hiring of Experts and Staff Exchanges** strengthens a growth in knowledge by hiring and borrowing candidates and staff whose expertise and skills are lacking within an institution.

• **Promoting Subject Based Links** fosters communication between museums with similar collections, creating an easier way to transfer ideas and materials.

9 Steps to Evaluating Orphan Collections

1) Consult your collections policy
2) Consider the cost of acquiring the collection
3) Consider the space needed to store the collection
4) Consider the staff time required to integrate the collection upon arrival
5) Ensure there is funding to finance the acquisition
6) Make an onsite inspection of the collection
7) If time constraints are putting the collection in danger accept it and then decide what to accession
8) Complete paperwork which applies to the transfer of the collection
9) Recognize the legal implications of acquiring the collection

Redirecting an Orphan Collection

1) Consult the National Collections Development Strategy to determine if an ANHMC member institution has a related collection
2) Identify any institutions who might be interested in the collection
3) Use the ANHMC staff biographies to identify who is most related to the subject of the collection
4) Offer to act as a liaison between the donor and the receiving institution
5) If the collection is outside the mandate and capabilities of all Alliance members, politely refuse the collection and advise on other possible venues

Providing Accessibility

Natural science collections in Canada are a rich and diverse accumulation of specimens. Physical access to these collections increases inter-membership support through long-term loan practices while resource sharing and funding partnerships increase relevance of inactive collections. Digitization of a collection generates online descriptive and pictorial representations of specimens, increasing accessibility and utility while minimizing handling and environmental risks to collections.

- **Adopting Standards** allows for the organization of activities related to digitization and information sharing.

- **Publishing Guidance Documents** ensures that all members are operating under the same set of standards and assumptions.

- **Identifying Funding Sources** will help simplify the process for others who might utilize these resources.

- **Streamlining Inter-Membership Loans** facilitates easy access to specimens through pre-approved environmental, exhibit and shipping requirements, and contacts with designated personnel.

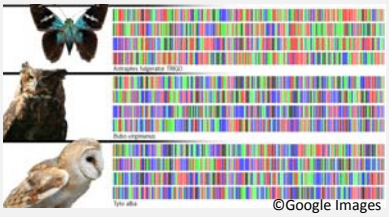
- **Setting Up Offsite Enrichment Programmes** protects strong but inactive collections at risk of physically deteriorating or becoming obsolete.

- **Sharing Resources** eases the increasing financial burden institutions tackle due to budgetary pressures.

- **Pursuing Digitization Projects** broadens access and creates a larger audience, international in scale and scope.

The International Barcode of Life

The International Barcode of Life (iBOL) is the largest ever biodiversity genomics initiative, spearheaded by researchers at the University of Guelph in 2003. Here, scientists created a new system of DNA "barcoding" in which species could be identified and discovered using a short genetic sequence from a standard part of the genome. Work over the past five years produced one million barcode records representing almost 80 000 species.



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The response to this accurate, fast and inexpensive type of identification saw the creation of iBOL, a project devoted to the construction of a global barcode reference library. With more than 25 countries involved, iBOL's goal is to have entered records from five million specimens – representing half a million species – into an interactive Barcode of Life Data System (BOLD) databank by 2015, and ANHMC institutions are contributing to this work. Through this joint venture, DNA barcoding is an emerging global standard in the identification of biological species.

Communicating Value

In order to actively engage people a hands-on approach must be taken when researching and presenting the natural record. Public access to this knowledge enhances visitor engagement and experience and expresses the value of biodiversity. Developing shared exhibitions and activities promotes the importance of natural history collections and creates an open network of information which museums and the public can utilize.

• **Presenting Joint Exhibits** brings the wealth of a collection to a large audience including members of other institutions.

• **Preparing Travelling Exhibits** allows museums to share and express the value of their collection to the public who reside in other geographical areas.

• **Communicating with Decision Makers** unites members and emphasizes the value of collections as a whole.

• **Mounting "Behind the Scenes" Activities** invites the public into labs and storage areas. By sharing experiences related to these programmes, museum departments can better understand what kinds of activities the public finds interesting, informative and accessible.

Get to Know Your Wild Neighbours

Established under the leadership of Robert Bateman, and dedicated to creating and inspiring connections between young people and nature, the programme offers annual contests, lesson plans, an interactive CD for classrooms and is focused on encouraging youth to head outside and "get to know" their wild neighbours.

Polar Perspectives

In early March 2007, the ANHMC, together with Students on Ice, began an educational initiative called Polar Perspectives which coordinated its research on polar regions.

Celebrating International Polar Year, the programme consisted of a national series of lectures across the country by prominent scientists and environmentalists. It also brought youth together in forums at various ANHMC sites to discuss polar education and preservation.

• **Defining Centres of Excellence** identifies member institutions that hold strong and active collections. Promoting these centres to the public creates community access to specialized information and raises the profile of an organization.

• **Utilizing New Media** brings the latest technology to museums and broadens audiences through gallery spaces and the Internet.

Implementation Plan

Goal A – Canada's biodiversity record is documented.

Specimen based collections and their documentation provide the tangible and verifiable record of Canada's biodiversity and geological history. Achieving this goal entails the establishment of an action plan to document biodiversity, having the appropriate expertise to do the job, and ensuring that individual institutions have the capacity to implement the plan.

Objective A1 – To coordinate the development of a national collection that documents Canada's biodiversity and geological history.

Short Term Action (1-3 years)	Long Term Action (4+ years)
• Identify all organizations, at all levels, tasked with dealing with biodiversity issues. • Identify any gaps in the ANHMC's combined collections. • Determine how these gaps are filled by non-members. • Explore roles for the Alliance and other institutions in the development of a national collection. • Establish a mechanism to assess, and identify appropriate repositories for orphan collections.	• Sub-committees in selected taxonomic disciplines develop and implement strategies and coordinate activities to address any gaps in the national collection. • Establish and implement a mechanism whereby the deaccessioning process at member institutions occurs within the context of a national collection concept. • Establish an accreditation system for research collections.

Gems from Mont Saint-Hilaire

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A collaboration between the Canadian Museum of Nature (CMN) and the Royal Ontario Museum (ROM) saw the acquisition of a rare mineral collection from Mont Saint-Hilaire, Quebec, worth over $300 000. This purchase coincided with the opening of the CMN's Earth Gallery while paralleling the ROM's desire to add to its mineral gallery. The allocation of minerals saw the lot split into two equal monetary values before each museum selected the major and most valuable stones in an alternating manner. The end result found the ROM collecting more stones of greater value but less in quantity than the CMN. Each institution split the cost of this purchase and benefited equally from this unique opportunity.

Objective A2 – To ensure Canada has sufficient and appropriate taxonomic expertise.

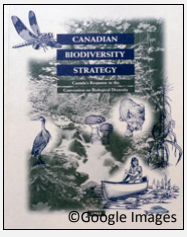
Short Term Action (1-3 years)	Long Term Action (4+ years)
• Determine the national distribution of current expertise, taxonomically and geographically, both in and out of the Alliance, and identify gaps or concentrations in that expertise. • Offer internships and other training opportunities in selected taxonomic disciplines at member museums.	• Approach Canadian universities in relation to the development of a joint strategy to train specialists in taxonomy and systematics, especially in response to any identified gaps. • Explore mechanisms whereby existing and future taxonomic capacity of Canadian natural history collections are considered in curatorial hiring decisions.

Objective A3 – To provide institutions with the capacity to play their role in the preservation of Canada's biodiversity.

Short Term Action (1-3 years)	Long Term Action (4+ years)
• Consider specific ANHMC initiatives that may support the Canadian Biodiversity Strategy and the Barcode of Life project within the context of the ANHMC mandate and the resources that may be necessary to accomplish the required results. • Continue to pursue access to additional funding sources for museum research and collection development and management. • Facilitate access by staff from other institutions to specialized facilities and equipment at member museums.	• Establish practices for the preservation and management of museum collections. • Establish common standards for the selection and retention of collections. • Develop a strategy to address infrastructure needs associated with the preservation of biodiversity. • Establish an accreditation system for research collections.

The Canadian Biodiversity Strategy

The Canadian Biodiversity Strategy was created to recognize existing legislative responsibilities for biodiversity in Canada and emphasize the importance of intergovernmental cooperation. This collaboration helps to create the policy and research conditions needed for environmental management, while encouraging all Canadians to take action in support of ecological sustainability.



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Goal B – Biodiversity collections, and the information about those collections, are accessible.

Access to natural history collections information is key to providing Canadians with knowledge about their natural heritage, and to obtaining public and political support and funding. The digitization of collections information can lead to a database which is distributed amongst ANHMC members, web searchable with the ability to query and customizable so as to display results.

Objective B1 – To provide access to information about Canadian biodiversity associated with natural history collections.

Short Term Action (1-3 years)	Long Term Action (4+ years)
• Identify and adopt collections data standards and procedures. • Improve the quantity and quality of collections information through the Internet, by identifying funding sources that support online collaborations. • Pursue joint development of digitization projects. • Improve the message about Canadian biodiversity in member's galleries and education and public programmes. • Through workshops and forums, share examples of effective and innovative practices in engaging people with collections.	• Establish a web interface for searching ANHMC collections. • Support research strategies and initiatives to make collections more accessible through the recognition of this need during an institution's annual budget process.

Objective B2 – To provide physical access to specimens.

Short Term Action (1-3 years)	Long Term Action (4+ years)
• Develop strategies to expand physical access to specimens. • Encourage and facilitate the exchange of specimens and loans of collections between member institutions.	• Implement the strategies associated with providing physical access to specimens. • Continue to encourage and facilitate the exchange of specimens and loans of collections between member institutions.

Goal C – The value and relevance of Canadian biodiversity, and the collections which document that biodiversity, are appreciated by the public.

The Canadian public needs to be made aware of the issues and value of natural history collections, as well as the importance of documentation, and the challenges of sustainable development and environmental management. An appreciation by the public of these issues will influence decision makers to support the work of natural history museums. ANHMC members and others that hold these collections must make the documentation of biodiversity a key priority.

Objective C1 – To influence key decision makers to support a comprehensive approach to documenting Canada's biodiversity and preserving documentary evidence in natural history collections.

Short Term Action (1-3 years)	Long Term Action (4+ years)
• Work with the Communications Committee to approve key messages, tactics and implementation. • Provide decision makers with specific information about the ANHMC's initiatives, particularly the National Collections Development Strategy.	• Continue to provide decision makers with information about ANHMC's initiatives. • Organize these messages and tactics and implement these processes.

Objective C2 – To ensure that the public understands that decisions to protect the environment, require that scientists can correctly identify species and have ongoing access to specimens for research.

Short Term Action (1-3 years)	Long Term Action (4+ years)
• Work with the Communications Committee to approve key messages, tactics and implementation.	• Organize these messages and tactics and implement these processes.

Objective C3 – To encourage ANHMC members to develop collections that provide a comprehensive record of Canadian biodiversity of national significance.

Short Term Action (1-3 years)	Long Term Action (4+ years)
• Work with the Communications Committee to approve key messages, tactics and implementation.	• Organize these messages and tactics and implement these processes.

Natural History Collections in Canada

Creating a collaborative national collection between member museums protects specimens locked away in vaults and at risk of being forgotten and is a practical approach to enhancing an institution's reputation.

An Alliance survey, updated in 2010, found that, jointly, the ANHMC houses 19.7 million specimens, with a total of 510 individual collections. The metadata compiled from this survey was based on a matrix to determine if collections were strong, active, inactive and/or weak.

Survey Results

- 158 Strong/Active collections = 31%
- 76 Strong/Inactive collections = 15%
- 79 Weak/Active collections = 15%
- 197 Weak/Inactive collections = 39%

Collections Strength Table

Strong enough to contribute to the institute's mandate while its taxonomic importance supports the current needs of the institution.

Weak in advancing the institution's mandate, or limited in its comprehensiveness taxonomically.

Active effort is being made to add to and improve the collection.

Inactivity suggests the need for a close examination as to the purpose and potential of the collection.

The survey results revealed that collections which are strong and active outnumber those currently classified as weak and inactive. Collections considered to be weak and inactive have a greater chance of not only becoming stagnant but also orphaned. The fact that a strong and active status exists for most collections within the Alliance, as a whole, provides an important counterbalance to this observation.

In order to be effective, communication and cooperation between partners is vital. Knowing the types of collections housed within member institutions, and what specimens each museum would benefit in acquiring, allows for the growth of a national collection.

Challenges and Opportunities

CHALLENGES

Inactive Collections

In the face of limits in financial support and space for collections, there is a greater possibility for specimens to become irrelevant and not well monitored for agents of deterioration. There are currently five collections considered inactive at all institutions: Botanical Macro Remains, Botanical Micro Remains, Acari, Bryozoa and Nematoda.

Weak Collections

At present, there are three collections which are considered weak throughout all institutions: Meteorites, Diplopoda, and Chilipoda. Alternate repositories for these collections, however, do exist at the Geological Survey of Canada (GSC), Agriculture and Agri-Food Canada (AAFC), and the University of Guelph.

Repeat and Underrepresented Collections

Levels of duplication in collections and research throughout all institutions infer less variety in specimens and research scope. This, combined with underrepresented collections, diminishes potential variety in research and limits the types of specimens exhibited.

Gaps in geographic coverage have been noted within some collections for Alberta, Northern British Columbia, Newfoundland and Labrador, Nunavut, Ontario, Quebec, and the Yukon.

OPPORTUNITIES

Active Collections

Adding to a collection can increase research and public interest. Although the survey revealed that many collections are inactive, there are also a number of which are being fully utilized. In total there are currently 66 active collections while 15 collections are strong and active at four or more institutions.

Strong Collections

A strong collection can support the growth and development of a museum. This includes increased funding, public attendance, research collaborations and conservation practices. There are currently 27 collections that are strong at four or more institutions. Another 40 are currently considered strong but inactive collections and should be monitored closely to ensure their importance is not diminished through inattention.

Collection Possibilities

A weak collection at one museum could be utilized to greater advantage at another. With most inactive collections having an active counterpart, some institutions might unknowingly have the materials to fill geographic and/or taxonomic gaps elsewhere. This presents the opportunity for long-term loans, and the possibility of joint research and collections trips. This is also a potential rationale for the deaccession and transfer of certain collections when mutually desired.

What's In Your Collection?

Growth in a museum involves shaping a vibrant and active collection. To do so institutions must be willing to maintain their significant collections, reshape their infrequently used collections, acquire specimens which would enhance museum objectives and consider the transfer of specimens, currently lying dormant, to repositories where they may serve their highest potential in knowledge generation and perpetuation.

Member Institutions Key					
Canadian Museum of Nature	**CMN**	**Prince of Wales Northern Heritage Centre**	**PWNHC**	**Royal Tyrell Museum**	**RTM**
Montréal Space for Life					
Biodôme	**BIO**				
Botanical Garden	**JBM**				
Insectarium	**INS**				
Planetarium	**PLA**	**Royal British Columbia Museum**	**RBCM**	**The Manitoba Museum**	**MM**
New Brunswick Museum	**NBM**	**Royal Ontario Museum**	**ROM**	**The Rooms Provincial Museum**	**ROOMS**
Nova Scotia Museum	**NSM**	**Royal Saskatchewan Museum**	**RSM**	**Yukon Beringia Interpretive Centre**	**YBC**

ANHMC TOTAL	**19,724,120**	**Strong Active**	**Strong Inactive**	**Weak Active**	**Weak Inactive**
BOTANY					
	Algae	CMN	NSM	NBM	RSM MM ROOMS ROM
	Bryophyta	CMN NBM	ROM		RSM MM NSM ROOMS RBCM
	Fungi	ROM		PWHNC MM NBM	CMN RSM NSM ROOMS
	Hepatophyta	NBM	ROM		MM NSM ROOMS RBCM
	Lichens	CMN MM NSM NBM	ROM		RSM ROOMS RBCM

		Strong Active	Strong Inactive	Weak Active	Weak Inactive
	VASCULAR PLANTS (Ferns, Conifers, Flowering Plants)	CMN BIO JBM PWNHC MM NSM ROOMS NBM RBCM ROM			RSM
	Other*Macro Remains (Quaternary)		ROM		
	Other*Micro Remains (Quaternary)		ROM		
	Other*Pollens	RBCM	ROM		
	Other*Sediment cores	RBCM	ROM		
	Other*Seeds		ROM		
	Other*Wood Samples		RBCM ROM		
EARTH SCIENCES					
FOSSILS, VERTEBRATE					
	Fossil Agnatha	NBM CMN RTM		ROM	RSM MM NSM YBC
	Fossil Chondrichthyes	RSM NSM NBM CMN RTM		ROM YBC	MM
	Fossil Osteichthyes	RSM NSM NBM CMN RTM ROM		PWNHC YBC	MM ROOMS RBCM
	Fossil Amphibia	RSM NSM NBM CMN RTM		PWNHC YBC ROM	RBCM

		Strong Active	Strong Inactive	Weak Active	Weak Inactive
	Fossil Reptilia	RSM NSM RTM ROM	MM	PWNHC YBC	RBCM
	Fossil Aves	RSM CMN RBCM RTM ROM		PWNHC YBC	MM NSM
	Fossil Mammalia	PWNHC MM CMN RBCM RTM ROM YBC	RSM	NSM	
	Other Fossil Vertebrates (e.g. tracks, traces, unsorted)	NSM CMN		MM ROM YBC	RSM ROOMS RBCM
FOSSILS, INVERTEBRATES					
	Fossil Mollusca	MM ROOMS RBCM ROM	RSM NSM	PWNHC YBC	CMN
	Fossil Echinodermata	ROM	ROOMS	PWNHC MM YBC	RSM NSM CMN
	Fossil Porifera	ROM	ROOMS	MM	RSM NSM CMN YBC
	Fossil Athropoda	MM ROOMS NBM ROM	NSM	PWNHC	RSM CMN RBCM
	Other Fossil Invertebrates (e.g. brachiopods, bryozoans, unsorted)	MM NBM ROM	NSM ROOMS	PWNHC YBC	RSM CMN
FOSSILS, BOTANY					
	Palaeobotany	NSM NBM RTM ROM	ROOMS RBCM	PWNHC MM	RSM

		Strong Active	Strong Inactive	Weak Active	Weak Inactive
	Palynology	RBCM RTM ROM		NSM	RSM MM
	Other Botany Fossils (e.g unsorted)	ROM	RBCM		RSM MM
EARTH SCIENCES					
	MINERALS (inorganic, natural, solid) & Ore	CMN MM NSM NBM ROM	ROOMS	PWNHC	RSM
	GEMS (worked, cut and/or facetted minerals)	CMN NSM ROM			RSM MM
	ROCKS (Sedimentary; Metamorphic; Igneous)	CMN ROM	ROOMS RBCM RTM	PWNHC MM	RSM NSM
	Other*Unsorted Earth Sciences	ROM		MM	CMN RSM NSM ROOMS
	*Meteorites			MM ROM PLA	CMN RSM
INVERTEBRATE ZOOLOGY					
	GENERAL INVERTEBRATES				
	Porifera (Sponges)	NBM RBCM	NSM NBM CMN ROM		MM ROOMS RSM RTM
	Echinodermata (Starfish, Sea urchins, etc)	RBCM	BIO NSM ROOMS CMN ROM		MM NBM RSM RTM
	Cnidaria (Hydroids)	RBCM ROM	CMN	BIO	NSM ROOMS NBM RSM RTM

		Strong Active	Strong Inactive	Weak Active	Weak Inactive
	Platyhelminthes (Flatworms)	NBM ROM	CMN		MM NSM ROOMS RSM RBCM
	Nematoda (Nematodes)	ROM	CMN		MM NSM ROOMS NBM RSM RBCM
	Bryozoa (Moss Animals)		CMN ROM		MM NSM ROOMS NBM RSM RSM RBCM
	Mollusca (Molluscs)	CMN MM NSM ROOMS RBCM NBM	MM CMN ROM	BIO	RTM
	Annelida (segmented worms)	NBM RBCM ROM	CMN		NSM ROOMS RTM
	Other non-arthropod Invertebrates (excludes those cited above)	ROM	CMN	NSM RBCM	NBM
	Other – Faunal Assemblage	RBCM	CMN ROM		ROOMS
	ARTHROPODS				
	Araneae (Spiders)	ROOMS ROM	ROM	NSM RBCM INS	CMN RSM MM NBM
	Acari (Parasitiformes, Acariformes, Mites)		NBM		CMN RSM MM NSM ROOMS RBCM

		Strong Active	Strong Inactive	Weak Active	Weak Inactive
	Crustacea (Crabs, lobsters, shrimp, barnacles, sow bugs, etc)	NSM RBCM	CMN ROM	BIO NBM	RSM MM ROOMS
	Diplopoda (Millipedes)			NSM INS	CMN RSM MM ROOMS NBM RBCM ROM
	Chilopoda (Centipedes)			NSM NBM	CMN RSM MM ROOMS RBCM ROM
	Other Arthropods (excluding insects)		ROOMS	RBCM ROM	CMN NSM
	Other Arthropods (unsorted)	ROM			CMN
	INSECTA				
	Odonata (Dragonflies and damselflies)	NSM RBCM INS	ROM		CMN RSM ROOMS
	Hempitera &Homoptera (Bugs, cicadas, leafhoppers, aphids, etc)	NSM INS	ROM	RBCM	CMN RSM MM ROOMS NBM
	Coleoptera (Beetles)	CMN NSM INS	RSM NBM ROM	RBCM	MM ROOMS
	Diptera (True Flies)	NSM ROM	NBM		CMN INS RSM MM ROOMS RBCM
	Lepidoptera (Butterflies and Moths)	INS NSM NBM	RSM MM RBCM ROM	ROOMS	CMN

		Strong Active	Strong Inactive	Weak Active	Weak Inactive
	Hymenoptera (Wasps, ants, bees and sawflies)	NSM ROM		INS	CMN RSM MM ROOMS NBM RBCM
	Other Insect Orders – Plecoptera, Neauroptera, Thysanoptera, Anoplura, Mallophaga, Psocoptera, Orthoptera, Ephemeroptera, Thysanura, Collembola, Trioptera, Siphonaptera	NBM ROM	NSM	INS RBCM	CMN RSM
	Other*Miscellaneous unsorted samples	ROM		PWNHC	CMN ROOMS RBCM
VERTEBRATE ZOOLOGY					
	Agnatha	RBCM		ROM	CMN MM NSM ROOMS NBM
	Chondrichthyes	RBCM ROM		NSM	CMN RSM ROOMS NBM RTM
	Osteichthyes	CMN BIO MM NSM RBCM ROM	ROOMS	PWNHC NBM	RSM RTM
	Other*Fish Scales	CMN BIO	NBM ROM	NSM	
	Other*Fish (including Agnatha, Chondrichthyes And Osteichthyes)	NSM ROM			CMN
	Other*Frozen Tissue Samples	ROM			
	HERPS (Amphibia and Reptila)		CMN		

		Strong Active	Strong Inactive	Weak Active	Weak Inactive
	Other*Frozen Tissue Samples	ROM			
	AMPHIBIA (Anura, Caudata, Gymnophiona)	MM NSM NBM ROM	CMN ROOMS RBCM	BIO	RSM RTM
	REPTILIA (Testudines & Diapsida)	MM NBM ROM	CMN NSM RBCM	BIO RSM	ROOMS RTM
	AVES (Modern Birds)	CMN BIO NSM NBM ROM	RSM MM	PWNHC ROOMS	RTM
	Other*Bird Eggs	CMN NSM	NSM ROM	PWNHC	ROOMS NBM
	Other*Frozen Tissue Samples	ROM			
	MAMMALIA (Eutheria, Marsupialia & Monotremata)	BIO NBM ROM	CMN	PWNHC RSM NSM	ROOMS RTM
	Other*Frozen Tissue Samples	ROM		RSM MM NSM	CMN
	Other*Vertebrate – Skeletal (ZIC)	CMN ROM		NSM	ROOMS
	Other aquatic chordates (e.g. Urochordata and Hemichordata	RBCM			CMN NSM ROOMS NBM

Museum Collections Development

Collections development in museums comes in many forms including donation and purchase as well as long-term loan and ethical disposal processes. These methods protect collections that support an institution's mandate while maintaining collection standards at sustainable levels for member museums. Offering a collection that one museum is likely not going to use and develop to another institution interested in acquiring the specimens preserves the legacy of past research and documentation efforts. Member institutions share their development plans in order to mutually support research and collections activities.

	Botany	Invertebrates	Vertebrates	Earth Sciences
Montréal Space for Life ***Biodôme*** ***Botanical Garden*** ***Insectarium*** ***Planetarium***	•Sub-canopy tropical shrubs •22 000 taxon from around the world	•Cnidarians •Molluscs •Crustaceans •Urochorodates •Coleoptera (Quebec and International) •Lepidoptera (World) •Ornithoptera (Papua New Guinea) •Sphingidae	•**Amphibians** -American tropical amphibians -American Laurentian amphibians •**Birds** -Gulf of St. Lawrence seabirds -Subarctic seabirds •**Fish** -Freshwater American tropical fish -Small fish species from lower trophic levels •**Mammals** -American tropical mammals -American Laurentian mammals	

Canadian Museum of Nature	•Non vascular plant species rare in Canada **•Algae** -Rare Canadian specimens -Material representing ecological and distributional extremes **•Bryophytes** -Temporal representation including recently collected material -West Coast, Prairie, Maritime and Arctic Material -Liverworts -Hornworts **•Lichen** -West Coast, Prairie and Maritime material -Rare Canadian species -Material representing ecological and distributional extremes **•Vascular Plants** -West Coast, Prairie and Maritime material -Rare Canadian species -Temporal representation including recently collected materials	•Molluscs: Temporal gaps from the early 20th Century **•Invertebrate Palaeontology** -Champlain Sea -General species groups for exhibit and education	**•Amphibians** -Areas that straddle provincial boundaries -3 major suture-zones in Canada **•Birds** -Temporal gaps from the past 20 years **•Fish** -Southern areas of Quebec **•Mammals** -Marine animals	**•Geology and Minerology** -Specimens which put Canada in a global context -Temporal representation -Gems from northern territories

New Brunswick Museum	•Crustose lichens •Saxicolous lichens •Micro and Macro fungi •Liverworts •Freshwater and terrestrial algae •Aquatic vascular plants •Cyperaceae •Poaceae (Atlantic Canada) •Palaeozoic plants	•Marine and terrestrial invertebrates •Terrestrial molluscs •General growth phase insects •Palaeozoic invertebrates	•Palaeozoic vertebrates •**Fish** -Eastern Canada marine taxa •**Mammals** -Specimens to broaden the regional scope	•**Economic Geology** -New Brunswick: Representative of economic, modern and historic specimens •**Minerals** -New Brunswick and representative specimens •**Rocks** -New Brunswick specimens of interest
Nova Scotia Museum	•Nova Scotia vascular plants	•Marine invertebrates (including estuarine regions) •**Anthropods** -Broad-scale Aranea and marine habitats (including estuarine) •**Insects** -Geographical gaps within specified taxa	•**Amphibians** -Geographic (Cape Breton) and some temporal gaps •**Birds** -Representation of current avifauna •**Fish** -Temporal gaps in order to identify ichthyofauna •**Mammals** -Marine mammals and rarities: mainland and Cape Breton	

Prince of Wales Northern Heritage Centre	•Ethnobotany specimens from the Northwest Territories •Botany specimens for exhibit purposes if they contain a cultural component	•Invertebrate specimens for exhibit purposes if they contain a cultural component **•Invertebrate Paleobotany** -Exhibit-grade specimens from the Northwest Territories **•Invertebrate Palaeontology** -Exhibit-grade specimens from the Northwest Territories	•Vertebrate specimens for exhibit purposes if they contain a cultural component **•Vertebrate Paleobotany** -Exhibit-grade specimens from the Northwest Territories **•Vertebrate Palaeontology** -Exhibit-grade specimens from the Northwest Territories	• Earth Science specimens for exhibit purposes if they contain a cultural component
Royal British Columbia Museum	•Botany from Northern British Columbia and non-native species	**•Insects** -Araneae -Orthoptera -Microhymenoptera **•Invertebrate Zoology** **-**Parasites -Deep-sea species -Freshwater species -Taxa of northern and interior British Columbia	**•Amphibians** -Turtles -Exotic species -Taxa in areas with low human habitation **•Birds** -Exotic species -Loons -Palagic marine birds **•Fish** **-**Deep-sea fish -Exotic species (large fish) -Species from north half of the province **•Mammals** **-**Marine mammals -Skeletons -Taxidermy mounts	**•Earth History** -Bower Basin -Northern British Columbia -Southern and Eastern interior

Royal Ontario Museum	•Ontario coverage •Cratagus •Tropical species •CITES species **•Mycology** -Basidiomycota	**•Invertebrate Palaeontology** -Lagerstatte collections -Ontario **•Invertebrate Zoology** -Frozen tissue of all major groups -Porifera -Cnidaria (Staurozoa, Cubozoa) -Parasitic Platyhelminthes -Ontario Oligochaetes -Nematoda -Pacific Echinodermata	**•Amphibians** -Southeast Asia (Cambodia, Southern China, Laos) -High elevations in the Guiana shield -Viper snakes **•Birds** -All kinds of specimens **•Fish** -Cichlids -Guyana locales **•Vertebrate Palaeontology** -Species strengths in Hadrosaurs	**•Gems** -Canadian localities -Madagascar -Trans Himalayan suites -Large 'old world' gemstones **•Meteorites** -Asteroidal achondrites (winoaite, acapulcoites, aubrites) -Planetary achondrites -Chassignites -Carbonaceous chondriste (CB, CO, CH types) -Scientifically or historically important meteorites (Stannern, Juvinas, K-type chondrite) **•Minerals** -Specimens to support core areas of strength **•Rocks** -Examples of ore deposits from world-wide localities

Royal Saskatchewan Museum			•**Amphibians** -Snakes •**Mammals** -Small mammals (mice, voles, shrews)	
Royal Tyrell Museum	•Non-vascular plants	•**Invertebrate Palaeontology** -Display quality specimens from Alberta	•**Vertebrate Palaeontology** -Cretaceous and Paleogene Aves -Cretaceous and Paleogene mammals -Cretaceous and Paleogene reptiles	
The Manitoba Museum	•Aquatic, rare and weedy vascular plants •Dried fungi, mosses and lichens •Wet algae •**Paleobotany** -Precambrian stromatolites and other structures -Paleozoic algae -Turtle Mountain plants	•**Invertebrate Palaentology** -Ordovician anthropods and soft tissue -Cretaceous invertebrates -Quaternary specimens from Manitoba -Microfossils •**Invertebrate Zoology** -Marine (Hudson Bay)	•Ordovician-Silurian fishes and other chordates •Devonian tetrapods •Cretaceous fishes •Quaternary mammals (other than bison) •**Amphibians** -Provincial distribution •**Birds** -Provincial distribution •**Fish** -Provincial distribution •**Mammals** -Provincial distribution	•Meteorites and tektites: -Exhibit-grade specimens •**Minerals** -Exhibit-grade Manitoba specimens •**Rocks** -Large exhibit-grade specimens
Yukon Beringia Interpretive Centre			•**Vertebrate Palaeontology** -Extinct carnivore -Marine mammals	

Action Plan

The development of an institution's collections can be influenced by the order in which key priorities are addressed and applied. The sequential order within the table suggests the priority the ANHMC places on these activities.

Documenting Life	1. Coordinate research activities between member museums 2. Coordinate with other organizations and encourage partnerships 3. Enhance the exchange of information by promoting subject-based links 4. Promote staff exchanges and the hiring of taxonomic experts 5. Provide a right of first refusal option to ethically deaccession specimens 6. Collect specimens by creating alliances with zoological institutions 7. Preserve scientifically significant specimens by directing orphan collections
Providing Accessibility	1. Streamline inter-membership loans making it easier to borrow resources from member museums 2. Share museum resources where practical for capital infrastructure 3. Pursue digitization projects to gather and distribute scientific information on a broad scale 4. Adopt information sharing standards 5. Publish guidance documents related to digitization standards 6. Protect collections in danger of becoming obsolete by creating off-site enrichment programmes 7. Identify funding sources for all members to utilize
Communicating Value	1. Prepare travelling exhibits 2. Present joint exhibits 3. Provide behind the scenes activities to enhance visitor experience 4. Utilize new media to engage the public 5. Identify museums, that hold knowledgeably significant collections, as centres of excellence 6. Jointly communicate with decision makers

Collections Development Plan

A Collections Development Plan outlines the activities which relate to the planning, consideration, coordination and processing of resources and specimens needed to shape an exciting and knowledgeable national collection.

Action	How	Who	Outcome
• The ANHMC supports the development of knowledge through the coordination of research activities while respecting the autonomous mission and mandate of each member institution.	• Internal review processes evaluate research projects at member museums. This forecasts the operational impact of current active programmes and develops research opportunities to accommodate collections growth.	• Research and Collections activities are mutually strengthened when relevant staff is engaged in active planning and forecasting for collections growth.	• Collections growth reflects an increase in research activity.
• The ANHMC acquires and borrows specimens, models and required material in support of permanent and travelling exhibitions.	• Acquisitions within member museums are often supplementary to current research activity and gained through purchase, donation or exchange. These acquisitions are supported through long term loans and the presentation of joint exhibits, and completed by mutual agreements between Alliance members.	• Staff responsible for Collections and Research functions, within each member museum, pursue and negotiate specimen purchases and acquisitions that may be required in support of exhibition and programming functions.	• Thematically driven exhibitions convey messages based on the best specimens available and the use of appropriate resources. Sharing these resources enhances the profile of each Alliance member that circulates loaned material and presents exhibits.
• The ANHMC builds on existing collection strengths to have broad taxonomic coverage in its holdings.	• Periodic assessment of collections strengths and areas of specialization, through comparison with other collection activities, assists the Alliance, by avoiding duplication of effort, and fills important gaps.	• Collections and Research staff collaborate to identify specimens which supplement and enrich current ANHMC holdings.	• Duplication of projects and effort is avoided and the ANHMC collections reflect each institution's expertise.

• The Alliance network participates in joint activities with other organizations and museums.	• Each Alliance member participates in joint initiatives with other members, academic institutions and partners by applying expertise in documentation and preservation. The ANHMC also submits joint proposals to funding agencies to secure resources when appropriate.	• Directors identify initiatives with partners and negotiate support. • Scientific staff identify collaborations which will advance and complement institutional and ANHMC objectives.	• Projects are accomplished effectively and efficiently and ANHMC expertise is valued within these collaborations.
• The Alliance network places emphasis on the biodiversity of Canada in a national and international context.	• The Alliance seeks to fulfill its goal of creating a complete and comprehensive picture of biota in Canada, past and present while assembling collections with an international scope in support of comparative research.	• Scientific staff address areas of enquiry consistent with strategic plans. • Collections and Research staff assemble material that aids researchers in understanding current specimen holdings.	• A complete record of geology and biota of Canada is documented and preserved for all Canadians.
• The Alliance network maintains specialized collections and infrastructure for the benefit of the public as well as to provide mutual support.	• Each Alliance member identifies activities and infrastructure which will define centres of excellence. •When appropriate, Alliance members share access to specialized infrastructure which offsets potential duplication in capital expenditures.	• Directors plan and forecast infrastructure requirements that meet the network's needs, and adopt common standards for equipment when appropriate. • Collections personnel provide support services for other partner institutions.	• Resources and infrastructure are used effectively.
• The ANHMC considers the value to science and operational capacity when orphaned collections are presented.	• Each Alliance member weighs its operational capacity against the potential loss of valuable scientific material when these collections become available.	• Collections and Research staff examine these circumstances and search for support from appropriate network members while seeking funds from external sources.	• This ensures that scientifically significant collections are preserved for future generations.

Future Opportunities

Collaboration

Although museums contain a large portion of the natural history collections in Canada, academic institutions, governmental research facilities and private owners are part of a larger network of repositories. It is vital to create alliances not only with member museums but also with organizations which hold other collections relevant to Canadian biodiversity.

The use of open access to visual and descriptive data allows for collaborations between all groups - from citizens and scholars to policy leaders and taxonomic experts. By pursuing data sharing and open source data projects, mutual support and partnership is developed and maintained.

Public Access

Digital access to natural history collections, or what is also commonly referred to as cyber-taxonomy, is an effective way to distribute scientific information globally. Online collections are useful tools in educating the public about the geographic region in which they live as well as the multitude of environs which exist worldwide.

Creating an online catalogue is a practical way to distribute information on a large scale. Many ANHMC members currently have an online database dedicated to collections in their own institutions. The key is to take this information and combine the data into one large online national library of life.

Canadensys

This national effort, funded by the Canadian Foundation for Innovation, gathers specimen information from university-based collections. Currently the organization collects data from fungi, plants and insects, with a five year goal to digitize, publish and georeference three million of these specimens.

Moving Forward

Nearly all communities worldwide engage in some form of social networking and today, outlets such as Facebook, Twitter, Flickr and YouTube demonstrate that scope and reach. Placing a critical mass of a museum's collection on a digital platform, which a worldwide audience can utilize, is responsive to this global phenomena of information access. Podcasts, blogs, newsfeeds and videos are useful for audience development when a museum communicates its authoritative voice to others.

Posting collections data is only the first step. While online forums attract visitors, museums aim to sustain visitor interest. Those who use social networking sites are arguably, curators in their own right, many with their own blogs and websites which they maintain. By creating a space where these "everyday curators" can select and share content they are interested in, and passionate about, the greater likelihood they will continue to take interest in the museum and its collections.

Further Reading

ANHMC
www.naturalhistorymuseums.ca/index_e.htm
A description of each member museum including contact information and the mission of the organization. The site also has a list of current and past exhibits, at each institution, relating to biodiversity.

Barcode of Life and its Online Database (BOLD)
www.barcodeoflife.org
www.boldsystems.org/views/login.php
Introduction to the history and effectiveness of barcoding including a discussion board and a list of global events such as workshops and meetings.
The online depository contains a searchable database, a taxonomic list of kingdoms being barcoded, and a record of published projects.

Canadensys
www.canadensys.net
An introduction outlining the main goals of the organization including lists of workshops, data publications, a starter publishing tool kit and links to online downloads for digitizing a collection.

Canadian Biodiversity
www.canadianbiodiversity.mcgill.ca
An interactive map outlining current trends, ecozone hotspots and conservation issues. The site also includes a list of species in Canada and legislation relating to the natural sciences.

Canadian Museums Association (CMA)
www.museums.ca
A comprehensive guide to museums in Canada including legislation, a job board, daily news updates and publications relating to museum ethics.

Encyclopaedia of Life (EOL)
www.eol.org
An extensive online catalogue, including descriptions of species from around the world. Entries can be made by scientists and citizens, and includes photographs.

Get to Know Your Wild Neighbours
www.gettoknow.ca/ca
Includes multimedia, events, resources and contests about biodiversity for students, parents and teachers.

International Barcode of Life (iBOL)
www.ibol.org
A global barcoding initiative with daily news updates, a guide to partner nations, a barcode library and a list of scientific resources.

International Union for Conservation of Nature (IUCN)
www.iucn.org
The oldest and largest global network dedicated to environmental issues. With a list of worldwide partners and development strategies, the site also includes conservation action tools, publications and evaluation reports.

Member Museums

Regular Members

Canadian Museum of Nature (CMN)

Dr. Mark Graham, Director of Research Services
PO Box 3443, Station D, Ottawa, Ontario, K1P 6P4
www.nature.ca

The Canadian Museum of Nature promotes awareness of Canada's natural heritage through permanent and travelling exhibitions, public education programmes, active research and the maintenance of a 10 million specimen collection. The Museum is currently working with partners to enhance its national role to develop programmes and activities based on themes of environmental change over time.

Montréal Space for Life

Charles-Mathieu Brunelle, General Director
4101 Sherbrooke Street East, Montreal, Quebec, H1X 2B2
http://www2.ville.montreal.qc.ca/biodome/, http://www2.ville.montreal.qc.ca/jardin/jardin.htm, http://www2.ville.montreal.qc.ca/insectarium/, http://www2.ville.montreal.qc.ca/planetarium/

The City of Montreal's four institutions offer a variety of collections. The Botanical Garden is one of the largest in the world, while the Insectarium has more then 160 000 live and mounted specimens. The Biodôme is unique, with four ecosystems under one roof, with the Planetarium being a great way to explore the universe.

New Brunswick Museum (NBM)

Jane Fullerton, Executive Director
277 Douglas Avenue, Saint John, New Brunswick, E2K 1E5
www.nbm-mnb.ca

With over 60 000 square feet of exhibit space, the New Brunswick Museum collects, preserves, studies and exhibits provincial and national, cultural and natural heritage. Along with a remarkable natural sciences collection, the museum has expanded to include one of the largest collections of 19th century decorative arts and Canadiana in the Atlantic Provinces.

Nova Scotia Museum of Natural History (NSM)

Bill Greenlaw, Executive Director, Tourism, Culture and Heritage
1747 Summer Street, Halifax, Nova Scotia, B3H 3A6
http://museum.gov.ns.ca/nhm

At the Nova Scotia Museum of Natural History, visitors can get up close and personal with a Pilot Whale skeleton or one of the world's most accurate life-size Sei Whale models while examining the fossil evidence for North America's oldest dinosaurs, 100 million years older than T-Rex. Live displays at the museum vary with the seasons and range from local mice and snakes to frogs and spiders with naturalists on duty to interpret and assist visitors.

Prince of Wales Northern Heritage Centre (PNWHC)

Barbara Cameron, Director
PO Box 1320, 4750 48th Street
Yellowknife, Northwest Territories, X1A 2L9
www.pwnhc.ca

The Prince of Wales Northern Heritage Centre is the central museum for the Northwest Territories and houses collections and exhibits which focus on human and natural history. Along with housing the Northwest Territories Archives, the institution administers a variety of funding and outreach programmes that support community museums, culture and heritage throughout the territory.

Royal British Columbia Museum (RBCM)

Pauline Rafferty, Chief Executive Officer
675 Belleville Street
Victoria, British Columbia, V8W 9W2
www.royalbcmuseum.bc.ca

Dedicated to the preservation of the human and natural history of British Columbia, the museum offers three unique galleries and an Archives centre where exhibits are showcased. Through dioramas, visitors can experience walking through forests and the Ice Age while temporary galleries feature internationally renowned exhibitions and programming, enhancing the visitor experience.

Royal Ontario Museum (ROM)

Janet Carding, Director and Chief Executive Officer
100 Queen's Park
Toronto, Ontario, M5S 2C6
www.rom.on.ca

With six million objects in its collection, the Royal Ontario Museum offers engaging galleries of art, archaeology, and natural sciences from around the world while conducting valuable scientific and academic research in partnership with prominent institutions and governments.

Royal Saskatchewan Museum (RSM)

Dr. Harold Bryant, Director
2445 Albert Street
Regina, Saskatchewan, S4P 4W7
www.royalsaskmuseum.ca

Offering galleries and a range of educational activities, the Royal Saskatchewan Museum allows visitors to travel through three billion years of the province's geological and fossil history in the Earth Sciences gallery and trace the history of Saskatchewan's First Nations over the past 10 000 years in the First Nations gallery.

Royal Tyrrell Museum (RTM)

Andrew Neuman, Executive Director
PO Box 7500
Drumheller, Alberta, T0J 0Y0
www.tyrrellmuseum.com

The Royal Tyrrell Museum celebrates the long history and diversity of life on Earth, from the tiniest grain of pollen to the largest dinosaurs. Since 1985, the Museum has been internationally recognized for its paleontological research, collections and displays. Visitors have access to specimens of educational and scientific value with a chance to visit the badlands, where the fossils on display are found.

The Manitoba Museum (MM)

Claudette Leclerc, Executive Director
190 Rupert Avenue
Winnipeg, Manitoba, R3B 0N2
www.manitobamuseum.mb.ca

The Manitoba Museum shares knowledge about the human and natural heritage of the province, world and universe through its diverse collections, exhibitions, publications, outreach programmes, Planetarium shows and Science Gallery exhibits. Eight interpretive galleries also explore the history and environment of the province from its northern Arctic coast to its southern prairie grasslands.

The Rooms Provincial Museum (The ROOMS)

Anne Chafe, Director
9 Bonaventure Avenue
PO Box 1800, Station C
St. John`s, Newfoundland and Labrador, A1C 5P9
www.therooms.ca

With over one million objects, the Rooms maintains a collection relevant to Newfoundland and Labrador, showcasing archaeology and ethnology, history, and natural history. Combining the Provincial Archives, Art Gallery and Museum, the institution also offers a wide range of public programmes and services to engage visitors.

Vancouver Aquarium

Dr. John Nightingale, President
PO Box 3232
Vancouver, British Columbia, V6B 3X8
www.vanaqua.org

The Vancouver Aquarium is the largest of its kind in Canada and is home to over 70 000 animals, including dolphins, seals, stellar sea lions and beluga whales. While promoting the conservation of aquatic life through displays and interpretation, education, research and direct action, the aquarium also engages visitors by offering dolphin and whale shows, sea otter feeds and shark dives.

Yukon Beringia Interpretive Centre (YBC)

Brian Groves, Manager
PO Box 2703
Whitehorse, Yukon Territory, Y1A 2C6
www.beringia.com

Designed to tell the story of the Beringia region, the interpretive centre features dynamic exhibits and introduces visitors to the world of woolly mammoths, giant beavers and the environment of North America`s first people. Visitors and researchers can discover fossils, frozen mummified remains and other paleontological finds while attending lectures and camps of these early archaeology sites.

Associate Members

Beaty Biodiversity Museum

Dr. Wayne Maddison, Professor and Director
6270 University Boulevard
University of British Columbia
Vancouver, British Columbia, V6T 1Z4
http://beatymuseum.ubc.ca

Located at the University of British Columbia, the Museum contains over 20 000 square feet of collections and exhibits. Patrons can participate in a variety of educational programmes celebrating biodiversity while visiting the largest blue whale skeleton on display in Canada. The Museum also offers on site teaching labs allowing visitors to interact with a variety of specimens while learning how researchers use the collection.

**The Beaty Biodiversity Museum became a member of the Alliance of Natural History Museums (ANHMC) subsequent to the compilation of this analysis. Information regarding its collections will be reflected in future documents.*

Redpath Museum

David M. Green, Professor and Director
859 Sherbrooke Street West
Montreal, Quebec, H3A 2K6
www.mcgill.ca/redpath

Located on the McGill University campus, the Redpath Museum aims to preserve and foster the study of the natural world. Originally the collections of Sir William Dawson, the museum has several research labs and its collections represent palaeontology, zoology, mineralogy and ethnology.

Toronto Zoo

Dr. Bill Rapley, Executive Director
Conservation, Education and Research
316A Old Finch Avenue
Scarborough, Ontario, M1B 5K7
www.torontozoo.com

One of the largest in the world, the Toronto Zoo is open-year round and is home to 5000 animals within 287 hectares of land. The Zoo participates in many conservation, education and research programmes locally and internationally. Providing a unique wildlife experience, the Zoo aims to inspire people to live in ways that promote the well-being of the natural world.

Corresponding Members

Royal Alberta Museum (RAM)

Chris Robinson, Acting Executive Director
12845-102 Avenue
Edmonton, Alberta, T5N 0M6
www.royalalbertamuseum.ca

In the galleries and exhibitions of the Royal Alberta Museum, visitors can explore the natural and human history of the province. Through 40 000 square feet, they can visit mountains, prairies, forests and parklands while discovering everything from plants and animals to gems and minerals.

Alliance of Natural History Museums of Canada

Contact: Louise Winter
Canadian Museum of Nature, National Heritage Building
1740 Pink Road, Gatineau, Quebec, J9J 3N7
Tel: 613-566-4740 (direct line) / 1-800-263-4433 (general toll-free line)
Email: lwinter@mus-nature.ca