

# Redpath Museum

Fall 2008 Newsletter



Co-Editors: Ingrid Birker  
Linda Cooper and Anthony Howell

## FROM THE DIRECTOR'S DESK

By David M. Green



Photo by Owen Egan, taken during the *Soup & Science* week at the Redpath Museum.

The Redpath Museum continues to demonstrate that a university museum can play a central role in bringing science to both the university community and the public. In this month alone, we have hosted five public lectures as well as gallery visits by over 500 students on assignment from either McGill, Concordia, University of Toronto, or local CEGEPs and highschools.

Last spring the Museum was honoured by a visit from the *Hylcan Foundation* who held their annual meeting in the Hodgson Seminar Room. Composed of direct descendants of **Duncan Hodgson**, the donor of the museum's mounted lion and gorilla, as well as other artifacts from the McGill-Congo expedition of 1938, this Foundation pledged \$150,000 (over 3 years) towards the renovation of the Museum's teaching lab in Room 106.

The Museum also hosted a brief visit from the **Swedish Ambassador, Ingrid Iremark**, accompanied by the **Swedish Consul Montreal, Daniel Johnson**, and the Consular Assistant, **Gunnel Yates**. They toured the exhibit galleries and the Victorian lecture hall and expressed an interest in co-hosting the upcoming events for Darwin Day 2009.

The special visitor this fall is "**Sara**" the Museum's Triceratopsian teenager now being reconstructed and prepared by Paleontology technician **Chantal Montreuil**. **Hans Larsson** and his paleontology team will unveil their newest dinosaur on Friday evening, October 17<sup>th</sup>, starting at 4 PM. This fundraising event is a highlight of McGill's *HOMEcoming* weekend and it is necessary to get tickets in advance by phoning the Alumni office: 514-398-8288.

Hope to see you there.

## BIODIVERSITY DIVISION

By Andrew Hendry

Like an Almost-Great Diaspora, the biodiversity division continues to spread across the globe. The ensuing adventures do not even require embellishment. **Joey DiBattista (PhD)** again chased after sharks in the Bahamas and Florida, dodging hurricanes and filming a reality show for NBC based on shark research. **Erika Crispo (PhD)** sampled cichlid fishes in Uganda and managed to avoid elephant depredations – this time. **Cristian Correa (PhD)** traipsed over to Norway to study grayling, took a course in Panama, and will soon head off for Chile to reduce the abundance of native fishes. **Maryse Boisjoly (MSc)**, **Ann McKellar (MSc)**, and **Amy Schwartz (PhD)** chased guppies in Trinidad and were not this time turned away by the airline. **Renaud Kaeuffer (Postdoc)** sampled stickleback fish and nearly walked into a black bear on Vancouver Island. **Itsuro Koizumi (Visiting Postdoc)** sampled Dolly Varden fish and nearly lost a truck and snowmobile under meters of snow in Japan. **Xavier Thibert-Plante (PhD)** went to France for a summer school in mathematics and he promises he didn't have any fun. **Luis De Leon (PhD)** was a teaching assistant for a course in Panama. **Ann McKellar (MSc)** and **Tariq Gardezi (PhD)** finished their degrees, and everyone went to scientific meetings and published lots of scientific papers.



(Above) A member of the Trinidad welcome committee.

The division's fearful leader, **Andrew Hendry**, helped with field work in Trinidad and on Vancouver Island, took an administrative trip to Panama, and is now on sabbatical in California recuperating from the past six years at McGill. He visits the University of California at Davis on occasion but more often just hangs out and drinks fine wine at his family's vineyard in Napa: surely the greatest hardship of all – although he promises to check his email every now and then.

## PALEONTOLOGY NEWS

By Bob Carroll

The Redpath Museum, its founding director, **Sir William Dawson**, and the continuing research of the Vertebrate Paleontology Division hit the front page of *The Gazette* on July 7, with two additional pages in the *Extra* section, announcing the designation of the Fossil Cliffs of Joggins, Nova Scotia as a UNESCO World Heritage Site. This locality is famous for the discovery of hundreds of specimens of the oldest known fully terrestrial vertebrates within the hollow stumps of giant lycopod trees. The most important fossils are those of *Hylonomus lyelli*, the oldest amniote (the group including reptiles, birds and mammals, and so the ultimate ancestor of humans). These fossils were initially discovered by **Dawson** and **Charles Lyell** in 1852. However, the reptilian nature of *Hylonomus* was in doubt until research by **Bob Carroll** during his postdoctoral study at McGill (1962-1963), demonstrated that *Hylonomus* closely resembled primitive living lizards, and even shared

characteristics such as the presence of canine teeth with mammals.

Collection and description of fossils from Joggins has continued over the past 45 years and significant specimens are still being discovered. Current discussions with **Jenna Boon**, the director of the new Joggins research facility, will further facilitate joint research and training of graduate students.

**Trond Sigurdson** continues his PhD research on the putative sister-taxon of frogs, *Doleserpeton*, in collaboration with John Bolt at the Field Museum in Chicago. He will be speaking at the annual Vertebrate Paleontology meeting on details of its appendicular skeleton that suggest initiation of structures associated with the jumping capacity of modern frogs.

**Bob Carroll** is now finishing corrections of the copy-edited manuscript of the book, *RISE OF AMPHIBIANS: 365 Million Years of Evolution*. This book will be published in May, 2009, by Johns Hopkins University Press. It is the first book to include the functional anatomy, evolution, ways of life, and possible relationships, among all groups of fossil and living amphibians. **David Green** contributed to the final chapter: *The Future of Amphibians*. The book will include over 200 illustrations of fossil amphibians and 16 color plates reconstructing their soft anatomy and the environments in which they lived, ranging from their aquatic ancestry among fish, through their dominance in all terrestrial environments in the Paleozoic, to their anatomical diversity and specialized ways of life in the modern environment.



Dr. Robert Carroll, Professor Emeritus, is Curator of Vertebrate Paleontology, at the Redpath Museum.

In cooperation with the Provincial Museum of Inner Mongolia, Bob is now deeply involved in a long-term study of a wealth of specimens of Middle Jurassic salamanders (the oldest known). These specimens provide a link between the ancestors of salamanders and the emergence of the modern families - the subject of **Nadia Fröbisch's PhD** research. These fossils are extraordinary in the preservation of their

soft anatomy; including eyes, external gill, muscles, and skin showing texture, pattern of pigmentation, and costal grooves. The latter are especially important because they clearly demonstrate the highly terrestrial way of life of one particular lineage linking it to the ancestry of advanced living salamanders. This is but one element of a particular fauna that also includes three large neotenic forms. This assemblage will form the basis of a broader analysis of all salamanders that have been described from the Middle Jurassic through the Lower Cretaceous and attempt to establish the specific relationship with the living families and demonstrate the changes that have occurred during their origin from late Paleozoic salamander antecedents.

## FIELD WORK AND STUDENTS

By Hans Larsson

During this past season, two PhDs and a Masters student graduated from the paleobiology group. **Erin Maxwell** and **Nadia Fröbisch** graduated after four years of intensive grad school to finish their degrees with flying colours. Erin has moved on to Edmonton to take up a prestigious Killam postdoctoral fellowship and Nadia is exploring options to continue with postdoctoral research in either Chicago or Berlin. **Luke Harrison** finished his Masters and has stayed to continue with a PhD to examine the evolution of the gene regulatory network driving the fish fin to tetrapod limb evolutionary transition. Two new students have entered the Larsson lab to take up the empty desks. **Edwin Arce Correa** has moved from Panama to begin a Masters thesis on Late Cretaceous plants from Columbia and northern Ontario. **Emily Bamforth** has begun a PhD to work on the faunal palaeoecology of Grasslands National Park (GNP) in Saskatchewan.

This year's fieldwork that started in GNP and vicinity, located another 140 fossil localities, collected a partial articulated herbivorous dinosaur, and fragments of a very juvenile *Tyrannosaurus rex* skull. We also had a record number of students enrolled in the accompanying field course. Fifteen students joined the field course and set the stage for further large-scale classes for many years to come. Over half the vertebrate palaeontology graduate students in Canada have now taken this course. The *Tyrannosaurus rex* skull is currently wading through the paperwork to arrive at the Redpath Museum early this fall for further research and reconstruction.

In August, **Matthew Vavrek** and an undergraduate research student, **Julie Rousseau**, traveled to a remote region in northern Yukon to explore Late Cretaceous rocks. This exploratory trip recovered over 400 pounds of fossil plants and paves the way for more full scale work in the region next year. This September/October some of us will travel to Columbia to explore some Cretaceous rocks to see if we can find the first dinosaurs from the region. This work is in

collaboration with a paleobotany colleague at the Smithsonian Tropical Research Center in Panama.

The *Triceratops* skull recovered two years ago in Saskatchewan is being mounted for display in the Redpath Museum gallery. To draw more public interest (and potential funding) to the Museum's exhibits, the specimen will be unveiled on October 17th, to kick-off the McGill *HOMEcoming* weekend. This specimen is the first dinosaur addition to the gallery since the *Albertosaurus* was mounted in the 1980s and the first in the gallery to include original fossil. If successful, this unveiling will be the start of many additional gallery displays to come, revitalizing the presence of new fossil exhibits and showcasing some of Canada's fossils recovered by our research group.

## WORLD CULTURES COLLECTION

By Barbara Lawson

### Donations

**Mrs. Nina Reid** of Richmond (UK) donated over twenty objects from the collection of her late brother-in-law, **Dr. Battersby**, who was a graduate in Medicine at McGill. His home and medical practice were at 2165 Wellington in Pointe-Saint-Charles. The collection includes a variety of brass and wooden objects from West Africa, and also miscellaneous African, Indian, Asian, and New Guinea weapons.

### Collections and Research

**Barbara Lawson** was awarded a grant of \$10,000 by Associated Medical Services (Hannah Foundation for the History of Medicine) to research images related to the Todd collection in England and Belgium and to have the Redpath visual material inventoried, accessioned, scanned, and stored according to archival standards. **Pam Miller**, Osler Librarian, will assist with the production of a thematic guide of archival collections related to Todd. **Kristen Dobbins**, former Ethnology intern, was hired to scan images and assist with archival research.

**Dr. Jason Kalman**, professor of Hebrew Literature at Hebrew Union College in Cincinnati (Ohio) and **Dr. Jaqueline du Toit** of the University of the Free State (South Africa) are completing a manuscript for McGill-Queen's Press on McGill University's purchase in the 1950s of fragments believed to belong to the Dead Sea Scrolls. These five small papyrus fragments are part of the Redpath Museum collection. The Dead Sea Scrolls are texts of great religious and historical significance, as they include practically the only known surviving copies of biblical documents made before 100 CE and preserve evidence of considerable diversity of belief and practice within late Second Temple Judaism. High density photographs of the Redpath fragments were taken in February 2008 and infra-



red analysis was undertaken at Canadian Conservation Institute to establish whether the fragments might have additional traces of writing which will contribute to their identification.

A lichen specimen, *Pseudevernia furfuracea*, now in the collection of Harvard University's Farlow Herbarium, has been confirmed as originating from one of the mummies in the Redpath Museum collection. The lichen specimen was originally found within the chest area wrappings of an unknown mummy in Montreal circa 1860. The lichen sample was acquired and identified at the time by **Edward Tuckerman**, a professor at Amherst College. A request for assistance in locating the unknown mummy originated with **Dr. Michaela Schmul** who is writing an essay about the lichen found in the Farlow Herbarium for the journal *Opusculum Philolichenum* and also preparing an exhibition for the Harvard University Herbaria about plants used in ancient Egypt.



A lichen specimen now at Harvard's Farlow Herbarium was removed from the wrappings of this Redpath mummy circa 1860." Photo Credit: CCI, NMC.

The Ethnology collections were visited by **Mr. Neal Putt** on behalf of the Pacific Islands Museums Association. **Dr. Andrew Nelson**, bioarchaeologist at the University of Western Ontario, also visited the collections in relation to a grant being developed to establish a digital database of Egyptian mummy radiographs

## Exhibits

**Pottery and the Body**, an exhibit on Colombian/Ecuadorian pottery and body ornamentation using selections from the Brian Rooney Collection, was installed in the Ethnology gallery in May 2008.

The Redpath Museum will lend several important objects from its African collection for a second exhibit of **Arts africains** to be held at the **Montreal Museum of Fine Arts**. The exhibit will open in November 2008 and is guest curated by **Louis Perrois**, internationally known ethnologist and specialist in the arts and cultures of equatorial Africa.

## Internships / Work Study Projects / Volunteers

The Ethnology division participated in the Faculty of Arts internship program during the winter term 2008. Intern **Kristen Dobbin**, a U4 student with a double major in Anthropology and Art History, photo-documented artefacts in the Redpath's African collection including over 500 objects collected by Dr. J. L. Todd. **Lindsay Rowe**, a U3 Art History student, worked as a curatorial assistant during the winter term, as part of McGill's Work Study Program. In addition to general collections work and cataloguing of the Hills and Reid/Battersby donations, she assisted with the development and installation of an exhibit on Colombian/Ecuadorian pottery and body ornamentation using selections from the Brian Rooney Collection. Volunteer **Sara Pimpaneau** offered assistance with French translations of exhibit texts. New volunteer, **Ari Bayuaji**, has been cataloguing and photographing Indonesian material.

## SCIENCE WRITTING

By Linda Cooper

One thing is certain - the scientific manuscript is on the cusp of change. Before the advent of on-line journals, researchers were bound by the tight space constraints of print journals. Now however, electronic publishing offers limitless space for scientists to explain their ideas and discuss their new findings. The question is: will science writing improve as a result?

To help researchers write clearly about their work for both on-line and print journals, **Linda Cooper** gave a series of seminars locally and internationally on "Writing, Editing, and Publishing in Science". These lectures were given to a broad range of graduate trainees including: those who attended the 2<sup>nd</sup> annual International Brain Research Organization's (IBRO) Pain School held at McGill University; graduate trainees in the Biochemistry department also at McGill; students in McMaster University's Psychology department; as well as those at the Université de Sherbrooke; and researchers from the NCCR-Frontiers in Genetics at the University of Geneva.

**Linda Cooper** also helped administer an on-line *Nature* blog "The Good Paper Journal Club". To spread the message that complex ideas can be explained in a straightforward manner, *Nature* editors and those interested in analyzing the features of well-written science articles exchange ideas about the strengths and deficits of selected papers. This growing web blog invites lively debates about issues as diverse as effective titles, the use of the passive voice, and the effects of on-line journals. With real time and on-line help, scientists may soon be on their way to writing more persuasively, precisely, and effectively about their important findings.

## PUBLIC PROGRAM AND SCIENCE OUTREACH

By Ingrid Birker

The Museum's fiscal year ended on *Museums Day* (May 27) with a record-breaking 4,462 visitors! This boosted the Museum's annual visitorship to over 42,000 for this past year. About one quarter of these visitors came on Sunday afternoons for the *Discovery Workshops* and the *Super Science Documentary Film* series. We are grateful for the continuing support of a dedicated team of Sunday afternoon Welcome Desk Volunteers scheduled and trained by **Janina Szuszkowska** and **Andrew Mestan**.

Highlights of last year's public program included a presentation on *Darwin Day* (February 12) by Dr. **Rees Kassen** (University of Ottawa), flashlight tours on *Nuit blanche* (March 2) which attracted over 1500 visitors to the museum via horse-drawn calèches from the McCord Museum, monthly *Cutting Edge Lectures in Science* (public evening lectures attended by a total of 536 people), 16 *Freaky Friday* lectures (total of 1269 participants watch McGill scientists debunk myths and misconceptions and then watch a popular science fiction or horror film), and a *Mother's Day* concert entitled *Gracias a la Vida*, featuring singer Michèle Hekimi and her musicians (this concert kicked off the Museum's annual campaign and raised over \$900 towards the publication of the Dawson Gallery Guide).

School groups represented 34% of the museum's annual attendance this past year. There were twice as many francophone students as compared to allophone students and two-thirds of these students were from elementary schools as compared to secondary schools. The university students that visit the museum represent 28% of the annual attendance, which is four times the proportion in a general public museum.

The Museum's Outreach Division was proud to accept the following awards and grants:

- an **NSERC PromoScience Grant**, valued at \$21,000 annually for three years, to create and improve both the content and delivery of the Museum's educational resources. Entitled *Free Radicals – new science media for better science learning*, this project is managed by **Torsten Bernhardt**
- a **Richard H. Tomlinson Fellowship in University-Level Science Teaching** awarded to **Ingrid Birker** for her research studies on the effects of university museum exhibits on student learning of biological evolution
- a **Delise Alison Travel Award** enabled Ingrid Birker to give a presentation about Science Outreach at McGill for the delegates of the International Committee of University Museums in Manchester, England

Photo: Claudio Calligaris

Ethnology Gallery, 3<sup>rd</sup> floor of Museum

## INFORMATION ABOUT THE MUSEUM

Visit the new and improved Redpath Museum **WEBSITE**:  
[www.mcgill.ca/redpath](http://www.mcgill.ca/redpath)

### MUSEUM-linked educational Web sites:

Museum website address and the page that links to virtual exhibits on Canadian biodiversity, minerals, insects, amphibians, and artefacts:

<http://www.mcgill.ca/redpath/exhibits/web/>

### Museum ADMINISTRATION:

Director: **David Green**

Acting Director 2008- 2009: **Graham Bell**

Administrative Officer: **Marie LaRicca**

### Museum COMMITTEES

The following Museum Committees were struck in December 2006:

**Safety Committee:** Tony Ricciardi (Chair), and Marie La Ricca

**Curriculum Committee:** All academics except Hans Larsson.

**Space Committee:** Everyone except Brian Alters and Ingrid Birker

**Exhibit Committee:** Ingrid Birker, Claire de Mazancourt (Chair), Barbara Lawson and Anthony Howell.

**Collections Committee:** Virginie Millien (Chair), Barbara Lawson (Co-Chair) and Hans Larsson.

**Outreach and Public Program:** Ingrid Birker

**Promotion & Tenure Committee:** Brian Alters, Robert Carroll, David Green, Graham Bell and Don Kramer

**Publications Committee:** Ingrid Birker, Linda Cooper and Anthony Howell.

### Redpath Museum CLOSED:

#### 2008

Oct. 11, 12, 13-- Thanksgiving

Dec. 20 to Jan. 4— Christmas / Noël

#### 2009

April 10, 11,  
12, 13--

Easter/Pâques

May 16, 17, 18--

- Journée des  
patriotes

June 20, 21, 22,

23, 24-- Saint-

Jean-Baptiste

June 27, 28, 29,

30, July 1-- Canada Day

August 29, 30, 31, Sept 1-- Labor Day

Oct. 10, 11, 12-- Thanksgiving

Dec. 23 to Jan. 4—Christmas / Noël

