# **CEN Bulletin**

## CEN RESEARCHERS AND STUDENTS WELCOME CANADA'S GOVERNOR GENERAL

On September 18th, several CEN researchers and students had the honour of welcoming Her Excellency the Right Honourable Michaëlle Jean, Governor General and Commander-in-Chief of Canada. Her Excellency travelled to the North over the summer and was impressed by the Northerners' vitality and the breathtaking scenery. Since these travels, she continues to take interest in the dreams and concerns of Northerners. During her meeting with CEN members and Louis Fortier from ArcticNet, she shared these concerns, presented her ideas for education in the North and sought to better understand the scope of the research conducted by scientists and students.





Photos: Marc Robitaille

PAGES BULLETIN (VOL. 17, NO. 3, OCT. 2009) EDITORIAL BY REINHARD PIENITZ AND ANDRÉ F. LOTTER



CEN researcher Reinhard Pienitz co-edited an issue of the PAGES (Past Global Changes) Bulletin. The PAGES project is an international effort to coordinate and promote past global change research. This issue focuses on advances in paleolimnology, with special emphasis on recent methodological developments and their significance for research in the PAGES context. Several contributions herald a PAGES initiative aimed at the high-resolution reconstruction of the climate history obtained through lake records from several countries, as well as those resulting from deep sediment drilling efforts in old crater lakes, such as in Lake Pingualuit in Nunavik (front cover). Regional syntheses are crucial for establishing and

pin-pointing the spatial and temporal patterns of climate change across climatic, hydrological, and ecotonal boundaries, thereby allowing to distinguish between climate-driven and anthropogenic impacts on terrestrial and aquatic ecosystems at both the site-specific and the landscape scales.

#### MARK YOUR CALENDARS!

Your Northern Scientific Training Program (NSTP) applications for next year and your reports for this year's field work will be ready to be signed shortly. For Laval University students and professors, they will be printed by mid November and available for signature at the CEN secretariat. Please contact the representative at your university for more information.

ArcticNet's sixth Annual Scientific Meeting (ASM2009) will be held from 8 to 11 December 2009 at the Fairmont Empress Hotel and adjoining Victoria Conference Centre in Victoria, British Columbia. As the largest annual Arctic research gathering held in Canada, the ArcticNet annual meeting is the ideal venue to present results from all fields of Arctic research and stimulate networking and partnership activities.

This year, the **CEN 2010 Symposium** will take place on February 25 and 26 in room 2330 of the G.-H. Kruger Building, Laval University. The event will be a joint symposium bringing together researchers and students from CEN, the NSERC - Produits forestiers Anticosti Industrial Research Chair, the Caribou Ungava project and ArcticWOLVES (see details in A Word from your Student Reps).

#### **ANNOUNCEMENTS**

- Last July, northern researchers mourned the sudden passing of their friend and colleague Robert (Bob) Jefferies. Bob was an active Arctic researcher for more than 50 years and was internationally renowned for his innovative research. From 2008 onwards, CEN was honoured to have Bob as a member of our International Advisory Board and he was also a key researcher in the ArcticWOLVES initiative. His devotion to northern ecology and his involvement at all levels will be missed by the scientific community, his peers and his friends. A celebration of Robert's life will be held on Monday, November 9, 2009, 2-5 p.m. at the Great Hall (Hart House), University of Toronto.
- CEN-SCANNET-SAON: On October 27, CEN signed a Memorandum of Understanding (MOU) with the European network SCANNET as a contribution to global initiatives such as SAON (Sustaining Arctic Observing Networks). The MOU will notably augment CEN's international visibility as well as facilitate scientific exchanges and the sharing of stations across the circumpolar North by researchers and students. This MOU will increase CEN's impact at the circumpolar level while promoting and sharing our resources (stations, data, and highly qualified personnel).



### **CEN Bulletin**

#### A WORD FROM YOUR STUDENT REPS

Dear CEN students.

We are taking advantage of this issue of the Bulletin to relay several messages to the CEN student body. Firstly, we would like to welcome our new CEN student rep from UQAR, Yanick Gendreau. Secondly, the beginning of the academic year reminds to us to encourage all students with Northern projects and directors (or co-directors) who are CEN members to become a CEN student. Why should you join the CEN? For several great reasons! Among other things, as a member you can benefit from our program of prizes (publication prizes, bursaries for oral presentations, exchanges during doctoral studies, and productivity incentives) in addition to being invited to the CEN Christmas party which will take place on December 3rd at Laval University. We are planning to combine the party with a student meeting in early afternoon to discuss existing and upcoming projects. Also, you can be involved in the Centre's festivities for its 50th anniversary which will be celebrated in 2011. This said, we are looking forward to hearing your ideas on how we can highlight this event. Please do not hesitate to contact us at the following email address: etudiants@cen.ulaval.ca.

CEN's 2010 annual symposium will feature a whole new, dynamic approach bringing together CEN researchers and students and those from the NSERC - Produits forestiers Anticosti Industrial Research Chair, the Caribou Ungava project, and ArcticWOLVES for an event spanning two days (February 25-26). The first day's program will be devoted to CEN's multidisciplinary research with the second day focusing on wildlife themes specific to the three other groups. Students are invited to submit their ideas for invited speakers. Keep an eye on your emails for more information on the CEN 's 2010 Symposium!

Have a great fall and we look forward to meeting you!

Your student reps: Pascale (pascale.ropars.1@ulaval.ca), Tania (tania.giberyen.1@ulaval.ca), Frédéric (frederic.bouchard@ete.inrs.ca) and Yanick (yanick.gendreau@uqar.qc.ca)

#### CEN STUDENTS HONOURED

Philippe Constant was awarded the Cangene Gold Medal Award from the Canadian Society of Microbiologists in June 2009. His doctoral research was co-directed by CEN member Laurier Poissant (Environment Canada) and he is now a postdoctoral fellow at the Max Planck Institute in Germany.

**Catherine Plasse**, Master's student under Serge Payette's supervision in Laval University's Biology Department, was awarded one of two prizes for the best oral presentation at the International PPS Arctic Conference in Russia last April.

The Société de géographie de Québec awarded **Valérie Labrecque** a prize for the highest overall average for her Bachelor's degree in Geography in 2008-2009. She has continued on to undertake a Master's degree with Reinhard Pienitz in Laval University's Geography Department.

This year the prestigious Garfield Weston bursaries were awarded to six Canadian PhD students who are conducting research in the North. Of those six, two are CEN students from Laval University's Biology Department: **Jean-François Therrien** supervised by Gilles Gauthier and **Julie Veillette** supervised by Warwick F. Vincent.

#### CEN IN THE NEWS

Results from the international initiative ArcticWOLVES are summarized in the Circumpolar Biodiversity Monitoring Program (CBMP) newsletter. Researchers from ArcticWOLVES were dispersed across Nunavut and Nunvik to examine the trophic dynamics between terrestrial plant, bird, and mammal populations in the Arctic. e-CBMP Newsletter, Vol. 2, Issue 1.

CEN was awarded \$8.3 million dollars from the Minister of Indian and Northern Affairs to upgrade and expand its network of climate and field stations in the Eastern Canadian Arctic. Warwick Vincent, CEN director, explains that CEN is upgrading its research facilities in addition to building a Community Science Centre at Whapmagoostui-Kuujjuarapik and centres in Salluit and Umiujaq. Au fil des évènements, 14 May edition; l'Actualité, 24 August 2009.

Last spring, Laval University and the Centre

national de la recherche scientifique (CNRS, France) signed an international Memorandum of Understanding for research on northern environments in the context of climate change. This Memorandum aims to bring together scientific expertise from CNRS and CEN and to increase opportunities for collaboration while facilitating joint projects, exchanges between researchers and students, and offering the possibility of joint meetings and publications. Au fil des évènements, 14 May edition.

The Xstrata Nickel-Raglan mine fully supports the Caribou Ungava project studying the dynamics of migratory caribou of the Quebec-Labrador peninsula in a context of climate change. The Project Leader is Steeve Côté of Laval University with CEN members Jean-Pierre Tremblay of Laval University and Marco Festa-Bianchet from Université de Sherbrooke. The project is also supported by NSERC, the Ministère des Ressources naturel

les et de la Faune du Québec and Hydro-Québec. Marketwire, 19 May 2009.

A news bulletin highlighted the 15 years of collaboration between New Brunswick (government and industry) and the peat moss research conducted by the team of Line Rochefort at University Laval. Several media showcased the peat moss industry and related research on peatland restoration. Société Radio-Canada, 8 June 2009.

During an interview with Le Soleil, Monique Bernier, CEN codirector, states that local communities ought to be actively involved in the development of the North. According to this article, the government's promises of investing in the North may not have the repercussions originally sought. Le Soleil, 2 August 2009.



### **CEN Bulletin**

### BORÉAS

Groupe de recherche sur les environnements nordiques

The Greek God of the Cold North Wind BOREAS was the God of the cold North wind, the bringer of winter and father of snow. Would he be satisfied to know the Université du Québec à Rimouski (UQAR) created in September 2009 the "groupe de recherche sur les environnements nordiques" BORÉAS? Here's a brief historical perspective of this research group.

**Formerly BioNord** The research group BioNord was created in 2002 at UQAR to bring together about ten biology professors and their students to study the biodiversity of northern environments and its conservation. Research was conducted in forests, tundra, and on lakes, rivers and the sea. Northern environments were broadly defined and included all snow and ice covered environments during the winter. The biodiversity these systems foster plays a pivotal role in the earth's ecological equilibrium.

**BORÉAS** In order to better understand our rapidly changing world, BioNord expanded by recruiting new professors and by integrating a team of geographers. The long history of our northern environments, the evolution of our coasts, mountains and aquatic systems are now also being closely examined by the group. BioNord has become the "groupe de recherche sur les environnements nordiques" BORÉAS. It now comprises close to twenty professors, four research chairs (plus two in preparation), and about eighty graduate students. The logo and the website are being created as we speak and ideas for the development of BORÉAS are teeming. Half of the BORÉAS members are also CEN members, thereby closely linking these two groups.

At the moment of the publication of this CEN Bulletin, the God BORÉAS is awakening and his breath is blowing winter upon us. Wishing you a great winter,

Dominique Berteaux, BORÉAS director

THE INTEGRATED REGIONAL IMPACT STUDY OF NUNAVIK-NUNATSIAVUT, ARCTICNET INC.

ArcticNet

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Nunavik and Nunatsiavut are recognized as being particularly sensitive to climate change given their exposure to seasonal sea ice, lake and river ice, as well as their vast expanses of discontinuous and continuous permafrost on which dynamic ecotonal boundaries and mosaics prevail. Over the past decades, the consequences of accelerated warming have been recorded on these physical environments and are being widely felt by northerners. These climate impacts are coinciding with the demographic explosion of northern communities in concert with the diversification and development of the North's economy which constitutes another major source of change for the northerner's culture and traditional way of life. In this double context of change, the capacity of northerners to adapt relies heavily on their understanding of the ongoing changes and of the anticipated repercussions on their natural environment. The Nunavik-Nunatsiavut Integrated Regional Impact Study (IRIS) is jointly led by ArcticNet, a network of centres of excellence Canada, and the CEN. This IRIS brings together scientists from the natural, social and health sciences who work closely with various stakeholders of northern communities to prepare a detailed report on the status and impacts of climate warming. This regional impact study aims to facilitate the development of risk assessment tools and vulnerability management tools and to provide estimates of the amplitude of foreseen change to help communities elaborate cost efficient policies and adaptation strategies while respecting Inuit perspectives and aspirations.

#### BIOGRAPHIES OF CEN MEMBERS LEADING THE NUNAVIK-NUNATSIAVUT IRIS:



**Michel Allard** - Professor in the Geography Department at Laval University and CEN researcher. He has been conducting research in the North since 1979. He is also the IRIS Leader for ArcticNet's Nunavik-Nunatsiavut IRIS and the coordinator of the Northern Environment Program with the Ouranos Consortium. His scientific interests lie in the interface between geology, coastal geomorphology, permafrost research, and climatology. In addition to fundamental research, he and his colleagues are also involved in applied research projects relating to the response of permafrost and coastal communities to climate change. In 2008, he received the Northern Science Award from the Government of Canada.



Mickaël Lemay – ArcticNet Nunavik-Nunatsiavut IRIS Coordinator, he obtained his B.Sc. in Geography-Biology at the Université du Québec à Rimouski. He pursued his studies and completed his M.Sc. and Ph.D. with the CEN in the Geography Department at Laval University. During his Ph.D., he participated in a research exchange program with the Landscape Ecology Group at the Umeå University in Sweden. His research focused on the evolution of geomorphological and ecological dynamics of riparian zones in lakes of Northern Québec. As Coordinator, he works closely with ArcticNet researchers, northern communities, and various research partners with the aim of publishing a comprehensive synthesis on the major environmental and socio-economic issues of the North.

