



McGill University

School of Environment

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www.mcgill.ca/mse



A lot has happened in the last few months.

At the McGill School of Environment, Associate Director Marilyn Scott, the Graduate Affairs Committee, and the MSE Staff are madly scrambling to put the finishing touches on the Graduate Environment Option program that received approval from the McGill University Senate in April. This means the MSE will be accepting for the fall semester of 2007 its first cohort of graduate students. The Environment Option is truly remarkable – it represents a partnership with over 26 other McGill graduate programs. While this is a significant step forward, it represents, we hope, just the first step forward in graduate training and research within the MSE.

At the University level, there are very encouraging signs of the McGill University community taking serious steps forward in sustainability. It is with great pride that I see that many of our MSE students are leading this effort with their colleagues and friends from other programs across McGill. The McGill Rethink conference this year was a tremendous experience and I was beaming to see some of our students standing in front of a full house explaining to the participants how they can make a difference and challenging McGill University to do better.

On a personal level, this winter-spring term has made me think that our efforts are really worth it. As a contributing author to the most recent Intergovernmental Report of Climate Change I have been involved in numerous interviews with the local and national media. While I have been asked to contribute my opinions on various environmental matters by the press, my observation over the last four months is that there has been a sea of change in attitudes. Over the 20 or more interviews I have done since early February, I have not once been asked to defend the science of climate change or scientific assessments of global environmental degradation – the consensus is an overwhelming one of acceptance that the footprint of humanity is damaging our planet. The focus of most of the interviews is now 'what is it that needs to be done'. I find it very encouraging that the discussion on environment has moved to this level. These experiences over the last four months convince me more than ever that education is the foundation on which change has to be built and at the MSE we will continue to try and improve our role in this effort.

Nigel T. Roulet, PhD
James McGill Professor of Geography
Director, McGill School of Environment

For the first time in the history of the world,
every human being is now subjected to
contact with dangerous chemicals, from the
moment of conception until death.

– Rachel Carson, *Silent Spring*, 1962



Awards, Kudos and Hurrah's!

Prof. Madhav Badami has been awarded the Shastri Partnership Development Seed Grant (Shastri Indo-Canadian Institute). The grant will fund a workshop on Transport, Health, Environment and Equity in collaboration with the Indian Institute of Technology (IIT) in Delhi, India. Thanks to Prof. Badami this grant will further strengthen the relationship between McGill University and IIT and foster student exchanges.

Prof. Badami's research centres around environmental policy and planning, sustainable urban transport, international planning, environment and development.

Prof. Elena Bennett has received a Canada Foundation for Innovation Leaders Opportunity Fund for her work on mapping, modelling, and managing ecosystem services.

Prof. Sylvie de Blois, who conducts research on biodiversity in agricultural landscapes, and *Prof. Elena Bennett*, who investigates ecosystems services especially at the interface between aquatic ecosystems and agricultural land, will advise Environment Canada on developing a set of biodiversity goals for agricultural lands in Canada through the National Agri-Environmental Standards Initiative (NAESI). They will contribute to developing appropriate criteria for selection of ecological indicators and credible biodiversity targets for the agricultural community at the provincial and national level within the context of the NAESI process.

When we heal the earth, we heal ourselves.

— David Orr

Prof. Sylvie de Blois is coordinating a new research initiative at the provincial level in collaboration with OURANOS, a Consortium on regional climatology and adaptation to climate change. The research focuses on the consequences of climate change on biodiversity patterns in Quebec and will involve several projects over the years. One of the first projects to be developed consists of modeling changes in plant species distribution in response to different climate scenario and will involve national and provincial conservation agencies and collaboration with Europe.

Diane Hasley *Environmental Field Activities Award*

The generous donation of the Diane Hasley Environmental Field Activities Award allows us to fund students, in high academic standing in their U2 or U3 year, who are enrolled in a field course or semester associated with the MSE degree program.

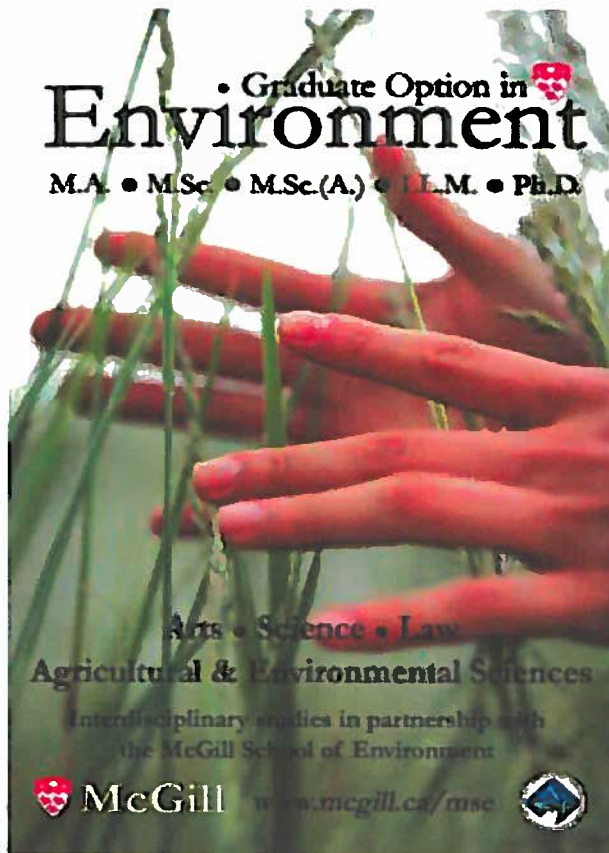
We are proud to announce the 2006-2007 winners:

Jenny DeMarco, U3, Environment and Development, minor in Economics

My research is based in six different First Nation communities and conducts intensive interviews with elders, chiefs, politicians, and decision makers concerning their perceptions of environmental change and management. My work will draw on my experience living in these communities and my review of current climate change adaptation literature in British Columbia and contrast it with the findings of my research.

Stephanie Palmer, B.A. Honours Environmental Studies

Human actions and decisions have been a major source of environmental change, and notably degradation, over time. The well-being of humans depends on our interactions with, and the health of the natural environment in which we live. In particular, there is growing interest in the role of a group of pesticides known as organochlorides in increasing breast cancer prevalence. For my honours research at the School of Environment I will be studying this relationship and using potential correlations in Prince Edward Island, Canada as a case study.



**On April 18, 2007, McGill University Senate
 approved 26 proposals for the
 McGill School of Environment (MSE)
 Graduate Environment Option!**

Coordinated and administered through the MSE, the Environment Option is available for Masters and/or PhD students in:

Agricultural and Environmental Sciences
 Bioresource Engineering, Entomology, Microbiology, Plant Science, Parasitology and Renewable Resources

Arts
 Anthropology, Geography and Sociology

Law

Science
 Atmospheric and Oceanic Sciences, Biology, Earth and Planetary Sciences and Geography

The Environment Option is aimed at students who wish to use interdisciplinary approaches in their graduate research on environmental issues and who wish to benefit from interactions that will occur as they work side by side with students from a wide range of different disciplines.

Goals of MSE Graduate Environment Option

To provide students with an understanding of how knowledge is transferred into action with regard to the environment;

To develop an appreciation of the role of science in informing that process, and the role of political, socio-economic, and ethical judgments in influencing that process;

To provide a forum whereby graduate students in environment throughout the University bring their disciplinary perspectives together and enrich each other's learning through structured courses, formal seminars, and informal discussions and networking.

Please visit our website www.mcgill.ca/mse/programs/grad_envr_option
 Contact Christina Zhu at christina.zhu@mcgill.ca or Marilyn Scott at marilyn.scott@mcgill.ca

**"I'd put my money on the sun and solar energy. What a source of power!
 I hope we don't have to wait 'til oil and coal run out before we tackle that."
 – Thomas Edison (1847-1931)**

The MSE is proud to announce that we will soon launch our new Internship course. This course will allow our students to gain hands-on experience in the workplace with a variety of agencies such as NGOs, government, academic groups, and policy makers.

These internships will facilitate independent learning under the co-supervision of a MSE academic staff member and a non-McGill liaison. The possibilities are exciting for both the MSE and our students.

We encourage you to contact **Colin Chapman** (colin.chapman@mcgill.ca) or **Pete Barry** (pete.barry@mcgill.ca) for more information.

Dean of Arts Internship Award - \$3,000

"This award is allowing me to realise my internship in Kenya this summer. This internship, in addition to bringing me an incredible personal experience, will permit me to reach my career objectives more easily."

..... *Kim McGrath*



MSE Career Centre a success!

"This is just a little note to let you know that our recruiting with the MSE really paid off this year. Thanks to the help we got from the MSE, QLF was able to put superb interns into the field, ultimately helping us to further our conservation goals and to make great (we hope!) things happen.

We hired three MSE graduates as interns this summer: *Laura Turmel*, *Alanah Heffez*, and *Lillian Harris*. Alanah was working on marine species at risk protection initiatives with local fishermen from Blanc Sablon, a small community on the Lower North Shore of Quebec. Laura was banding ducks and doing research for Ducks Unlimited in an isolated research camp near Cartwright, Labrador. Lillian was based in St. Andrew's, New Brunswick, and was working on a community-based conservation initiative with one of QLF's partners, the St. Croix International Waterway Commission. The three interns were superb - their understanding of biology was complemented by their grasp of how education, economics, and a whole range of social factors are intimately connected with conservation work." – **Simone Hanchet, Quebec-Labrador Foundation (QLF)**

The leaders of tomorrow!



"I had the opportunity of a lifetime last summer. As an environmentalist and activist, I had always revered organizations like the Sierra Club and Greenpeace, and I now had the chance to become intimately involved with the world's most recognized environmental organization. Last summer, I did a semester long training program with Greenpeace: the Greenpeace Organizing Term, which is a semester of advanced training for student activists. It's action-filled and the best hands-on training for students to become environmental leaders. I wanted to do this program because as a student activist, I wanted to have the proper tools to be an effective organizer and future leader. It also gave me an effective outlet for the helplessness I felt in regarding the problems plaguing our planet that I had been learning about through McGill. My experience with Greenpeace this summer was a life changing experience. Not only do I now have the skills needed to be an effective leader on campus, I have lifelong friends and fundamental respect for the people who use their lives to move us all towards global citizenry. Whatever I do in the future I know I will be prepared because of the Greenpeace Organizing Term. As for

what the future holds, I am very involved with Engineers Without Borders on Macdonald campus and I will be spending four months as a volunteer this summer in Zambia on a small sustainable development project and I have no doubt that what I learned last summer will be very useful in Africa as well." – *Mel Lefbvre*, MSE, Bsc, (AgEnvSc)



McGill student *Frédéric Julien* recently participated as a lecturer in the “Water and Youth 1st International Meeting”, which was held April 12-14, 2007, in Buenos Aires, Argentina.

His lecture was entitled “Facing the Eco-hydrological Crisis: Towards New Water Ethics” and was part of a four lecture series on “The Water Culture”. He stressed the need for a new relationship between humans and the rest of nature in general and a new water ethic in particular: an ethic of reverence for water as a source of life. He argued that it is only if “we recognise the intrinsic moral value of water and nature that we will be able to respect our environment and solve the global eco-hydrological crisis we ourselves created”.

More information on this event can be found at www.waterandyouth.org



The MSE supports McGill University students who work on environment initiatives. Three such students are *Joseph Cooper, Ben Yardeni and Robin Steinberg*. As part of the Desautels Faculty of Management curriculum they are enrolled in the core course Social Context of Business. This course examines how business interacts with the larger society. It explores the development of modern capitalist society, and the dilemmas that organizations face in acting in a socially responsible manner. Students examine these issues with reference to sustainable development, business ethics, globalization and developing countries, and political activities.

For their class project these students were assigned to take action and they felt that an important topic is the conservation of water. Joseph, Ben and Robin launched a campaign to promote awareness of the damages that water waste creates.

“Think a Drop” is an eye catching poster which they placed at water fountains, public washrooms, kitchens and labs on campus.

“Our goal is to have people more aware of their usage of water and its effect on the environment”.



Speakers Series

- ***Prof. Elena Bennett***

Interviewed by Jennifer Barber of Meristem Information Resources in Calgary (January 2007, again April 2007). No fast fixes to soil concerns. Published by the Soil Conservation Council of Canada.

Interviewed by Tommy Shurmacher of CJAD Radio for World Water Day on the Tommy Shurmacher Show (21 March 2007)

STARS Science Talks About Research for Staff. April 17, 2007. P Soup—the ins and outs of the phosphorous cycle. (McGill)

ReThink Synthesis Speaker. March 16, 2007. (McGill)

- ***Prof. Colin Chapman***

E. coli spreading between humans and chimpanzees in Ugandan wildlife park.

Quirks and Quarks CBC Radio interview, Montreal, Canada. March 31, 2007

- ***Prof. Garry Peterson***

Ecological Resilience: theory and practice. Interdisciplinary Graduate Environmental Science Conference, University of Quebec, Montreal, Canada. April 3, 2007.

Ecological Futures, Swedish Defense Department, Stockholm, Sweden. March, 2007

Inequality and Biodiversity Loss, Beijer International Institute for Ecological Economics, Stockholm, Sweden. March, 2007

Inequality and Biodiversity Loss, Center for Transdisciplinary Environmental Research, Stockholm, Sweden. March, 2007

Ecological Memory and Resilience, Dept of Geography, University of Montreal, Montreal, Canada. February, 2007

Discussant, The Fourth Interdisciplinary Graduate Student Research Symposium, McGill University, Montreal, Canada. March 2007

Resilience and Sustainability, Think Global Radio Show, Stockholm, Sweden, March 2007

- ***Prof. Anthony Ricciardi***

Global swarming: How biological invasions are changing the world. Queen's University, Kingston, 12 April 2007.

Global swarming: How biological invasions are changing the world. Global Climate Change Symposium. York University Association of Graduate Students in the Biological Sciences, 34th Annual Biology Symposium. Toronto, 24 March 2007.

Biological invasions in Canada-US waters. Canada-United States Transboundary Water Relations Workshop, Foreign Affairs and International Trade Canada, Ottawa, 9 March 2007.

Can we predict the impacts of invasive species in inland waters? Swiss Federal Institute of Aquatic Science and Technology, Dübendorf, Switzerland, 19 January 2007.

Can we predict the impacts of invasive species in inland waters? 60th Canadian Conference for Fisheries Research/ Society of Canadian Limnologists Annual Meeting, 5 January 2007, Montreal.

- ***Prof. Nigel Roulet***

Northern Peatlands, Carbon Cycling and Climate Change. Swedish Agricultural University (SLU), Umea, Sweden. January 25, 2007

Entre Nous, McGill Reporter, February 8, 2007

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MSE New Collaborative Research Grant

We are pleased to announce that the first publication to emerge from a MSE New Collaborative Research Grant supported project has been accepted by Public Library of Science ONE.

Professors *Gregory Mikkelsen, Andrew Gonzalez, and Garry Peterson* used this grant to fund an innovative interdisciplinary research project.

Economic inequality predicts biodiversity loss.

Abstract:

Human activity is causing high rates of biodiversity loss. Yet surprisingly little is known about the extent to which socioeconomic factors exacerbate or ameliorate our impacts on biological diversity. One such factor, economic inequality, has been shown to affect public health, and has been linked to environmental problems in general. We tested how strongly economic inequality is related to biodiversity loss in particular. We found that among countries, and among US states, the number of species that are threatened or declining increases substantially with the Gini ratio of income inequality. At both levels of analysis, the connection between income inequality and biodiversity loss persists after controlling for biophysical conditions, human population size, and per capita GDP or income. Future research should explore potential mechanisms behind this equality-biodiversity relationship. Our results suggest that economic reforms would go hand in hand with, if not serving as a prerequisite for, effective conservation.

The Public Library of Science (PLOS)
is a nonprofit organization of
scientists and physicians committed
to making the world's scientific and
medical literature a public resource.

www.plos.org

Speakers Series continued (Roulet)...

Northern peatlands, carbon cycling and feedbacks to climate, CGCS Distinguished Lecturer Series, Centre for Global Change Science, University of Toronto, March 27, 2007.

Ecosystem level carbon dynamics of peatlands: what measurements and models tell us, First International Symposium on Carbon in Peatlands, Wageningen, the Netherlands, 15-18 April 2007.

Climate Change and Peatlands, Sigma XI Montreal Chapter, April 20 2007

Global Environmental Change, Selwyn House School, April 30, 2007.

CJAD Radio Ric Peterson show, February 2007; CBC Daybreak, February 2007; CBC Radio Noon, February 2007; CTV Quebec and National News, February 2007; CBC World Service "The Link", February 2007; CBC "Daybreak", April 8, 2007; CBC "Daybreak", April 27, 2007; CBC "Radio Noon" round table discussion on environment, May 7, 2007 and CBC Daybreak, Guest Editor, May 28, 2007.



This year McGill announced the arrival of a new member of the teaching family – the birth of Mercury (little brother to MOLE, its predecessor, and half-brother to Minerva, who is in charge of registration) - as the University-wide course evaluation system. Notice he has Jupiter's eyes! As the winged messenger of the Roman gods, Mercury signifies the role that course evaluations fulfill in enabling students to communicate with their professors and the University about their courses.

Course evaluations serve primarily as a tool towards teaching improvement, informing students about courses, and as one of the elements for evaluating the teaching performance of staff for reappointment, tenure and promotion purposes.

Mercury gives students an opportunity to evaluate their courses and view course evaluation results through a secure website. Its main advantages include anonymity, 24-hour access, accessible from anywhere in the world where internet is available (especially useful for students 'in the field'), automatic reminders to students from the system, an economy of class time which was previously needed to collect information, and the evaluation forms and results can be made available in multiple languages by the departments.

Our students seem to be warming up to Mercury as response rates have jumped from half to around two-thirds from the fall to the winter terms. The response concerning quality of courses was 3.9 out of 5.0 and for the quality of our teachers the score was 4.1 out of 5.0. Mercury is giving our students the ease and freedom to express themselves and provide the kind of feedback that our administration can use to enhance the learning experience of future MSE students.

"I liked how you had the two 'electronic' guest lecturers. It provided a rare opportunity for us and I think it was good. Overall this class was very good and you managed to convert me from a sceptic to someone who is genuinely interested in the material. It is very clear to me that you have put a great deal of thought into the design of the class, the evaluation methods, and the special bonuses, i.e. the field trip to the museum and the guest lecturers. I appreciated it."

"Wonderful course! I learnt SO much. Everything was explained clearly and in a very interesting manner. The instructors collaborated very well with each other and couldn't have made a better team. I loved everything about this class..."

"Readings could be a little more challenging and I think (although it is not necessarily a popular measure) that more recommended readings should be made required (and be tested). There would be more learning (more complaining also) but it would make the class a little more useful."

"I found it interesting the variety of perspectives I saw throughout this class. The fact that the professors' views often clashed made for interesting discussions. The age differences between the three professors and their perspectives on the environment/open mindedness was apparent throughout the course and was interesting to observe and learn from."

"I think that I learned a lot during this course. I realized how complicated it is to understand environmental issues. This class was the most interesting one of the semester. I really enjoyed it, and liked to come to class. I think that now I have a better understanding of climate change and of all the other issues surrounding it. During this class I realized that everything is closely linked together – it amazes me to see how we can change one thing and it will change everything else."

"Good job. I liked your song about the bananas."

"This has been my favourite class at McGill. It was a wonderful opportunity to take skills learned throughout our four years here and apply them to a real world project. I feel I will come away from this class with important skills (ethics review, group collaboration, research design) which would have been hard to learn in a normal classroom setting."

"Education costs money, but then so does ignorance."
-- Sir Claus Moser
