

*in* **Focus**

**McGill**

Spring 2012



# McGill School of Environment

[www.mcgill.ca/mse](http://www.mcgill.ca/mse)



## THIS ISSUE

*“Your support  
helps us to address  
the environmental  
challenges  
of our time”*

- 2 Director’s Message
- 3 L.O.O.P. (Life Out of Plastic)
- 4 Green Careers
- 5 Internship Awards Recipients
- 6 Soaring to Great Heights
- 8 Kudos
- 9 Lost Bird Project
- 9 UN General Assembly  
- Harmony with Nature
- 10 National Student Fellows 2011
- 11 Kibale Health & Conservation Project

## Director's Message

*Professor Marilyn Scott, Director of the McGill School of Environment*



“What will this day be like, I wonder... What will my future be, I wonder ...” This quote from “The Sound of Music” may be very familiar to you, and I think of it often when I contemplate the short-term and longer-term opportunities for the McGill School of Environment. Today, all I see are great things!

This is the time of year when our students are studying for final exams and writing term papers. Last week I met with one of our students who had injured her hand and was struggling to find alternative ways to submit her written work. We decided that she could give me an oral report. Now I wish that I could do the same for all the students. You can't imagine what it was like to watch her as she brought her ideas together, to see the energy as she explained concepts, to realize the joy that she was experiencing through learning and sharing her insights with me. Our Honours students gave their final presentations on topics ranging from energy policy, to stream pollution, to why people scavenge in dumpsters. I can't say it often enough – we are so blessed by the quality of our students. When I think of them, I feel assured that their touch will ensure a better Earth for future generations.

This is also a time of enormous optimism among our faculty and staff. We have received terrific news and a major endorsement from McGill's Provost about what we have achieved to date and our vision for the future. Our most recent faculty recruit, Chris Barrington-Leigh, has received his first research grant, and Professor Colin Chapman has been awarded a Killam Research Fellowship for his work on primate conservation, disease, climate, and park management strategies. Thanks to funds from one of our generous donors, we were able to host Professor Nalini Nadkarni for two days. During her public lecture, she shared her insights regarding the canopy of tropical forests, she showed us how trees are able to paint and how marginalized communities can become engaged in conservation initiatives. She was such an inspiration to us all.

Our “Thoreau” Weekend Retreat has become so successful that we are now offering it each fall. With exclusive spots reserved for 1st year students in the MSE, students meet other incoming MSE students and experience environmental ethics as Thoreau may have. They share a variety of student experiences, perspectives and goals related to the environment; reflect on issues such as environmental activism, political constraints, economic dimensions, individual versus collective values, the role of religion and offering students unique opportunities for outdoor explorations. The weekend involves group activities that encourage mutual sharing of ideas and perspectives, enabling students to have a better understanding of the many opportunities and challenges involved in environmental studies. The student response to this retreat has been so positive that we are hoping to secure funding to be able to offer this unique weekend opportunity for years to come.

The MSE hopes that you spend time with family and friends this summer and to quote Henry David Thoreau “Live each season as it passes; breathe the air, drink the drink, taste the fruit, and resign yourself to the influences of each”.



## MSE Grad Starts Up Environmental Social Enterprise in Peru - L.O.O.P. (Life Out of Plastic) *by Kaitlyn Shannon, MSE Reporter*

**Irene Hofmeijer**, who graduated from the McGill School of Environment program in 2010, has taken her knowledge down south to Peru, where she has started up a social enterprise called LOOP (Life Out of Plastic), which raises awareness about plastic pollution.



After graduation, Hofmeijer worked as a research assistant under professors Lea Berrang-Ford and James Ford. During that summer, she was sent to the Peruvian Amazon to carry out field work. “It was saddening,” she says, “to see the amount of plastics accumulating along the Amazon river due to the lack of waste management services in rural communities.”

In just over a year, the small business has seen extraordinary success. LOOP has commercialized locally manufactured reusable bags made from rPET fiber (a textile made from recycled plastic bottles). They have introduced recycling services, organized educational campaigns, and engaged in beach clean-ups.

However, environmental issues are relatively new to the Peruvian discourse, and Hofmeijer says that getting people to care about the problem and its habits is a big challenge that LOOP faces daily. Hofmeijer reflects back happily on her MSE degree. “How I miss the MSE!” she laughs. She particularly values the systems-thinking approach that she learned from the MSE, and says it is extremely valuable in the work that she does today. She particularly has fond memories of ENVR 302, 400 and 401. “I even found myself looking back at ENVR 200 slides the other day for a class I was going to teach at a school. I really wish I still had that textbook!”

Hofmeijer recommends that MSE students take an economics or finance class if they have the opportunity. In both the work she does with LOOP and in her research work, she has constantly come across accounting and budgeting and MSE students would be well-equipped to handle these important tasks if they study finance during their degree.

Finally, Hofmeijer implores MSE students to get involved as much as possible with the MSE community. Hofmeijer was an executive member of MESS (the McGill Environment Students’ Society) in both her third and fourth years at McGill, serving as co-president in her final year. “The skills I gained from being involved in MESS have been extremely helpful over the last year,” she says.

From Montreal to Peru, Hofmeijer’s story is an inspiration to MSE students, reminding them that they are capable of accomplishing anything they put their minds to.



[www.lifeoutofplastic.com](http://www.lifeoutofplastic.com)

## Green Careers Week Keynote Speaker Advises Students to Stay True to Themselves

Katia Opalka, B.A. History '92, B.C.L. & LL.B. '97 (McGill) Counsel, Environmental Law

by Kaitlyn Shannon



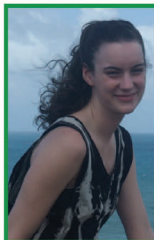
The School of Environment teamed up with McGill Career Planning Services to launch “Green Careers Week,” a series of events designed to raise student awareness of environment jobs. The keynote speaker told the audience about her experiences working in the world of “green careers.” Opalka completed both undergraduate and law degrees at McGill, and is now a specialist in Canadian environmental law as well as an adjunct professor with the McGill School of Environment.

After completing her undergrad in history, Opalka was still unsure where her career path would lead. Certainly, she had no intention of becoming a lawyer. But reflecting back on her experience, she says, “things happen when you’re studying or doing your summer jobs, and all these twists and turns will end up becoming the story of what is your career.” In her case, she stumbled upon a summer job in 1990 working on car brakes for her uncle in Germany. Her uncle placed her in charge of creating an environmental management system for the factory, and this sparked her interest in environmental issues. Later, almost by default, Opalka decided to enter law school. She then took a job with a corporate law firm, specializing in environment. “I became an environmental lawyer by accident,” she laughs. Opalka suggests that the best way to make a meaningful contribution to environmental protection is to identify your own strengths and interests, and pursue a job in that field. “Environment is a spectrum,” she says, “with pure nature at the one end and people at the other.” If you can determine where your interests fit on the spectrum, you’ll be able to find a job niche that suits your skills, experience and personality. “You’ll be much better at your job,” she assures students, “if you are doing what you really enjoy.”



# 2012 FACULTY OF ARTS INTERNSHIP AWARD RECIPIENTS

## Environment



**Tanya Taggart-Hodge, U2**  
Conservation Finance International  
London, United Kingdom

Tanya will intern at Conservation Finance International (CFI) in London, UK where she will be developing web content on market-based solutions, such as Cap and Trade, to environmental problems. Tanya has been involved with environmental initiatives on and off campus, through her participation on Arctic (2009) and Antarctic (2011) expeditions, her work with the Yukon Government Climate Change Secretariat and her position as Environment Commissioner for SSMU. She has also worked in Latin America, most notably in Bolivia and Panama. Her experience with CFI will enable her to gain a completely new perspective on conservation efforts from a business point of view.

**Emily Duncan, U2**  
Africa SOMA  
Elangata Wuas, Kenya



Emily is pursuing her passion to help others by undertaking a degree in the Faculty of Arts and Science in Environmental Science and a minor in International Development Studies. This past winter semester she studied on the African Field Study Semester expanding her interest in African environmental and development issues and is looking forward to continuing to pursue this interest through an internship with Africa



**Margot, Charette, U1**  
Maya Mountain Research Farm (MMRF),  
Belize, Belize

Margot will intern at the Maya Mountain Research Farm, a small NGO in Belize working to repair damaged agricultural land using permaculture techniques. Having previously worked for conventional farms and also for a student-lead greenhouse initiative in British Columbia, Margot will develop skills in organic agriculture, field that she explored while participating at the Concordia City Farm School last summer. Through this internship she will gain understanding of solutions for the sustainable rehabilitation and management of agricultural land.

**Timothée Pasqualini, U2**  
United Nations World Food Program  
Panama City, Panama



Timothée will intern at the United Nation World Food Program (UNWFP) in Panama City this summer. At the Latin American and Caribbean headquarters, Timothée will work with the Vulnerability Analysis and Mapping department, which uses GIS technology and data collection in order to write country profiles assessing food security. Timothée will thus learn more about the captivating nature of the interactions between human political societies and the environment.



**Zelda Moran, U1**  
McGill Middle East Program for Civil Society and Peacebuilding  
Summer Institute  
Sderot, Israel

Zelda will be interning at a community advocacy center run by the McGill Middle East Program for Civil Society and Peacebuilding (MMEP) in Sderot, Israel. The MMEP runs Rights Based Community Practice centers in Israel, Palestine, and Jordan, which work to improve living conditions for marginalized communities in these areas. Zelda has been a volunteer with the MMEP for 2 years, and hopes to use this internship experience to gain a better understanding of how effective community advocacy can work, and how it is being used to address the challenges facing the area. She hopes to develop skills which will prove useful in working to promote social, political, and environmental justice in the Middle East and beyond.

*The Faculty of Arts Internship Awards are generously funded by alumni, staff and friends of McGill University. Thank you!*

*A special thanks to the faculty, administrative staff and advisors that support the Faculty of Arts Internship Program.*

InternshipProgram  
Faculty of Arts

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## MSE Annual Public Lecture Soars to Great Heights

Dr. Nalini M. Nadkarni, Director, Center for Science and Mathematics Education, University of Utah, by *Kaitlyn Shannon*

As the MSE Annual Public Lecture came to a close, the room echoed with inspiration.

“I could listen to that again.”

“She’s so passionate!”

“That was beautiful, wasn’t it?”

Though she spent only a brief hour and a half with McGill faculty, staff, students and community members, Professor Nalini Nadkarni easily captured their hearts. Her contagious passion and drive left audience members inspired to pursue their own dreams the way that Nadkarni has pursued hers. She had the audience laughing, smiling, and applauding throughout the lecture, and the listeners leapt into a standing ovation when her talk came to an end.

Nadkarni has spent the past two decades at the forefront of treetop canopy research. She shared with the audience her unique scientific philosophy, which values communication and outreach just as much as rigorous academic research. By opening her lecture with a photograph of her parents and laughing about the fact that each member of her family has an ant named after them (her husband is an ant taxonomist), Nadkarni was no longer a simple lecturer talking about her field of study, but a fascinating woman recounting her own unique story.

Though the canopy was largely ignored by forest ecologists when Nadkarni was a graduate student, she was not content to let her feet rest on the ground, and single-handedly raised the issue of canopy biology to the forefront of ecological research. Less than three decades later, there are dozens of canopy research centres around the globe. She recognized that the canopy has a completely different microclimate than the forest floor, with its own diversity of plant and animal species. She realized that in order to protect the forests that she loves, she needed to bring her message to the broader community. “Science is not just for the scientist,” she told the audience. In establishing ICAN, the International Canopy Network, Nadkarni has taken some unique steps to get her message out. Nadkarni created “Tree Top Barbie,” an adventurous, scientific Barbie who turns the traditional idea of a Barbie doll completely on its head.

Distributed with her very own “field guide,” Tree Top Barbie is not only a toy, but also an “educative ambassador” to children around North America.



**International Canopy Network**

Credit: John Huey, Evergreen State College



Image: Filthy Assistant Eco-Art “Woman Hugging Tree” at Burning Man 2007 Black Rock City Nevada





Nadkarni also works in prisons in the United States, teaching inmates how to grow the mosses that are frequently used in garden baskets. This moss is usually taken from old growth forests in the Pacific Northwest, and in order to protect the wild moss, the inmates grow their own. Not only does this help achieve Nadkarni's scientific and conservation goals, but she says that it has received an overwhelmingly positive response in the prisons as well. "The inmates have the opportunity to feel a connection to nature and the outside world that they are cut off from."

Photograph by Benjamin Drummond / bdsjs.com

During the public lecture, Nadkarni's passion for trees and nature exuded from her. But in talking with her, this writer learned that Nadkarni has another less obvious love of her life: modern dance. Nadkarni was a dancer all throughout her childhood and into college, where she pursued an undergraduate degree in both field biology and modern dance. When it came time to graduate, she realized she had to make a choice. Like a true scientist, she gathered the data needed to "make the right decision". This involved spending one year doing field study research in the forests of Papua New Guinea, followed by six months at a modern dance studio in Paris. When these "trial runs" came to an end, she got out all her journals, went to a café, and read through them all. She realized that field biology offered her a life-long opportunity and the chance to use her mind, whereas as a dancer, she would face an intense, but short, career. "Sitting in the café in Paris she said: "It's field biology." Though she's devoted her life to the study of trees, Nadkarni still dances recreationally, and recently had the opportunity to help a dance group choreograph a dance about the rainforest. For Nadkarni, this was a high point in her career. "I can die now," she laughs, "the two parts of me have come together!"

When I asked Nadkarni about how she reconciles her outreach work in a scientific community where time spent away from rigorous research is often seen as wasteful, Nadkarni responded that it depends on one's definitions. "My own definition of science has grown to include the public engagement part. So I'm fulfilling my own contract of what science is. I'd like to continue this double road of engaging myself with scientific questions and also with public outreach." She also wants to focus on helping other scientists embark on similar public engagement programs. Many young scientists are hesitant about outreach, and she hopes to encourage them and give them tips along the way. Likewise, she hopes to inspire older scientists who have already contributed extensively to the field of science. She wants these veterans of the scientific community to serve as role models for younger scientists and pass on their knowledge to the non-academic community. "They can afford that now," she says, "and I can help them do it."



Credit: Nalini M. Nadkarni

During her time in Montreal, Nadkarni was introduced to the School of Environment and had the opportunity to meet with various professors and staff to discuss the programs and research at McGill. She was quite impressed. "I did not expect this at such a big, standard university." She was particularly pleased with the interdisciplinary nature of the environment program. "I was very impressed with this idea that to solve the world's environmental problems we need more than one discipline, we need multiple lenses, and we need different ways of looking at the problems. I admire the foresight and the vision to put together and maintain this school, teaching the next generation to have better tools at hand to deal with the problems we need to solve."

# KUDOS

## Killam Fellowships 2012 Awarded to Canadian Research Leaders



Ottawa, February 22, 2012 – The winners of the 2012 Killam Research Fellowships will tackle important research projects, four of which are in the areas of ecology and the environment. The Canada Council for the Arts, which administers the Fellowships, announced that a total of close to \$1 million has been awarded for the seven selected projects.

The Fellowships, among Canada's most distinguished research awards, provide \$70,000 a year for two years to each of the researchers. They enable researchers to be released from teaching and administrative duties so that they can pursue independent research. The recipients were chosen by the Killam Selection Committee, which included 15 eminent scientists and scholars representing a broad range of disciplines. Individuals were selected from 95 applications.

### Colin Chapman, McGill University

*Primate Conservation: future scenarios of population change given changing disease, climate, and park management strategies*  
Colin Chapman plans to explore risk factors to the primate population as a result of ecological transformations, putting emphasis on disease transmission from primates to humans and vice-versa. Contact with primates has led to the introduction of new diseases in the human population, such as HIV and Ebola. He will be working at Kibale National Park in Uganda, where he is coordinator and co-founder of a health and conservation project. He is an internationally recognized leader in studies of primate behaviour and ecology.

**Congratulations** to our jointly-appointed professors **Greg Mikkelsen** and **Colin Chapman** who received a research grant from the Quebec Centre for Biodiversity Science, to study "Individualism vs. Holism in Non-Speciesist Ethics and Law". Further information about their research can be found here: [webpages.mcgill.ca/staff/Group3/gmikke/web/ihinsel.html](http://webpages.mcgill.ca/staff/Group3/gmikke/web/ihinsel.html)

**Congratulations** to **Colin Chapman** and **David Marcogliese** who received an MSE New Initiative Grant. This project will determine how ecological and anthropogenic factors lead to spatial variation in elevated transmission probability and influence the occurrence and spread of diseases. From studies on primate communities, we can make predictive models of disease emergence or severity based on ecological data that varies in a spatially explicit manner. Such models could be useful in reducing changes of zoonotic transmission and/or the severity of disease in both wildlife and humans.

## Winners of the MSE 2011/12 Undergraduate Research Award are:

### Anne-Laure Morin (Diploma in Environment, Faculty of Agricultural and Environmental Sciences)

HIV, Reproductive Health, and Fertility Control in the Rural Community of Kanyawara, Uganda. The aim of this research is to determine the most efficient way to disseminate condoms in a community where the risk of HIV transmission is high, and the condoms are limited and difficult to obtain for psychosocial and economic reasons.

### Megan Lydon (B.Sc. McGill School of Environment: Ecological Determinants of Health)

Soil ingestion (geophagy) in rural Panamanian women. This project intends to identify the prevalence of geophagy (i.e. soil consumption) among preschool children in Panama; determine if geophagy is linked to increasing levels of parasitic infection in the children; assess the possible risks and benefits of geophagy for children and identify and suggest how child health can be promoted in terms of exposure to infection.





## The Lost Bird Project: “Forgetting is Another Kind of Extinction”

by Kaitlyn Shannon

In late March, the MSE assisted in the promotion of a film entitled, “The Lost Bird Project,” which was showcased at FIFA (the International Festival of Films on Art) in Montreal. The film tells the story of Todd McGrain, an artist whose passion for birds leads him to create five enormous statues of North American birds that were driven to extinction by the modern age. He wants to use his sculptures to commemorate the lives of these birds, and to remind the world of this loss. The film documents McGrain’s journey as he travels across eastern North America in hopes of finding the perfect location to place each sculpture. This might be the place where the bird was last seen or a common habitat for the bird. It needs to be a place in the wild, in the bird’s natural habitat, but needs to also be somewhere where people will see it regularly. After choosing each location, McGrain battles with park rangers and state officials to gain permission to place his sculptures.



McGrain hopes that his works will remind passers-by of the absence of the birds and will teach them that forgetting is another kind of extinction. If we can hold onto the memories of what has been lost, perhaps we can prevent more loss in the future.

## UN Program: Interactive Dialogue of the General Assembly on Harmony With Nature

To commemorate International Mother Earth Day, the UN General Assembly hosted an interactive dialogue on harmony with nature. Prof. Peter Brown (joint appointment with MSE and Geography) was part of a panel discussing, “Ways to promoting a holistic approach to sustainable development in harmony with nature”, which focused on the two challenges in a holistic approach to sustainable development in harmony with nature: ensuring the integration of economic, social and environmental objectives and ensuring equity both within and across countries as well as between generations. The panel offered a wide array of perspectives, including sociological and anthropological ones, on how humankind can effectively reconnect with nature to achieve economic and social development that is more harmonious and balanced in relationship to the Earth’s carrying capacity. The interactive dialogue is intended to inform the on-going preparations for the UN Conference on Sustainable Development to be held in Rio de Janeiro, Brazil in 4-6 June 2012 (Rio+20).



Left to Right: Peter Brown, Professor MSE/Geography; Ms. Vandana Shiva, Founder of Navdanya, India; Mr. Cormac Cullinan, Environmental Attorney, South Africa; Mr. Martin Khor, Moderator, Executive Director of the South Center; Secretary for the panel; Ms. Riane Eisler, Author of “The Real Wealth of Nations: Creating a Caring Economics” (2007)

## 3M National Student Fellows 2012

by the Society for Teaching and Learning in Higher Education



### John Alex Pritz

3rd Year, B.Sc.(Ag&Envr); Ecological Determinants of Health-Cellular, McGill School of Environment

Alex's nomination presents a remarkable story of international conscience and willingness to do difficult and impactful work in developing countries, including Haiti after its devastating earthquake. Emerging work on campus, in Senate and elsewhere, augments this work. Alex is making a difference in some very challenged and challenging environments. He is a very good relationship builder, especially across cultures. As a result of the Haiti work, Alex co-founded Developing Pictures, a now international student film group with chapters at McGill and Cornell University.

After receiving an inaugural McGill Dalai Lama fellowship for the Iwastology Program (Iwasto being Fillipino for to make right and wastology being the study of waste), Alex spent two months in the Philippines putting this project into action, teaching high schools students about our world of waste through the lens of exploratory filmmaking.

Alex does not use many "I" statements, but rather gives credit to anyone else that he has worked with. He says he came to University to gain the tools necessary to start working on what he considers to be the most pressing issues facing his generation. He has a grasp on the challenges that face students and leads by example.

<http://www.stlhe.ca/awards/3m-national-student-fellowships/2012-3m-national-student-fellows/>



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Facebook

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[www.mcgill.ca/mse](http://www.mcgill.ca/mse)





## Small Clinic, Big Impact

by Colin and Lauren Chapman, McGill professors, Kibale Health and Conservation Project, Uganda

The Kibale Health and Conservation Project has finished building a medical center just inside the main gates of Kibale National Park in Uganda, providing desperately needed health care for the local community.

The centre is making a real difference through community outreach programs that prevent disease and provide practical hands-on training for McGill medical students, who come and study at the centre. Students in the Canadian Field Studies in Africa program visit each winter and help us organize fundraising events, as well as develop other ideas. Students from the McGill School of Environment also helped out by developing a plan for long term sustainability of the centre.

This year we ran a student driven effort to raise medical supplies for the Health Center and requests for obtaining donated supplies were tremendously successful. In fact, we were so successful that we obtained double what we had thought we would get. We now have approximately 60 boxes of 700 lbs to ship over. This has exceeded our budget so, we now need your help to ship these supplies to Uganda.

We realize there are many important projects that can use your help, but we ask that you consider that in Uganda:

- Life expectancy is only 45 years
- 30% of all deaths among children aged two to four are caused by malaria, which can be easily treated or prevented
- 26% of children under the age of five are malnourished
- And in the area we work, the average distance to the nearest hospital is 15 km

Imagine trying to get your child to the hospital on a bicycle when he or she is delirious with malaria.

Donations can be made by contacting  
Dr. Colin Chapman  
(Colin.Chapman@mcgill.ca).



**The MSE is:**

**Director—Marilyn Scott**

### Faculty Members

**Madhav Badami (School of Urban Planning)**

**Christopher Barrington-Leigh (Inst. for Health & Social Policy/ Economics)**

**Elena Bennett (Natural Resource Sciences)**

**Peter G. Brown (Geography)**

**Colin Chapman (Anthropology)**

**Sylvie de Blois (Plant Science)**

**Jaye Ellis (Faculty of Law)**

**Frédéric Fabry (Atmospheric and Oceanic Sciences)**

**Iwao Hirose (Philosophy)**

**Nicolas Kosoy (Natural Resource Sciences)**

**Brian Leung (Biology)**

**Gregory Mikkelson (Philosophy)**

**Adam Millard-Ball (Geography)**

**Jeanine Rhemtulla (Geography)**

**Anthony Ricciardi (Redpath Museum)**

**Raja Sengupta (Geography)**

**Renée Sieber (Geography)**

**Ismael Vaccaro (Anthropology)**

### Faculty Lecturers

**George McCourt**

**Pete Parker**

**Kathryn Roulet**

### Staff

**Danielle Lefebvre**

**Shannon Scott**

**Christina Zhu**

# 2nd Annual MSE Ecospiel



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